



UNESCO International Centre for Engineering Education



Newsletter

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From the Director

The fundamental role of academia is the cultivation of a new generation able to develop and advance a country. Creativity and innovation are amongst many important characteristics that need to be instilled in its graduates. Highly creative, innovative, motivated, dedicated and experienced academic staff are required to achieve this objective. Also necessary is visionary university management, with university officers being dedicated to attain such objectives and facilitating the proper atmosphere conducive to achieving success.

Creativity and innovation cannot be achieved nor can it exist under a bureaucratic regime, where those in power are mostly preoccupied with their paperwork, including surveys, questionnaires, forms, reports, statistics, etc, being imposed on academics in order to keep them busy and control them as if they were irresponsible

abusers of their academic freedoms. What we see more often in academia these days is rampant bureaucracy and the imposition of dubious management and administration practices.

The economic rationalism so eagerly injected into academic life and activities in recent years has caused serious financial problems in academia with the overgrowth

of bureaucracy at the expense of teaching and research staff. There is no money for core activities so that many academics are being made redundant and hordes of new managers

are being appointed, so much so that soon there will be more proverbial *Chiefs than Indians* in academia.

It has become obvious that universities, in order to survive and flourish in the future, need leaders and champions, not managers; leaders who can create new ideas, not paper shufflers; leaders who can generate and not consume scarce and ever diminishing funds.

Many universities experience serious structural, organisational and financial problems, which lead to apathy, low morale and switching off by many academics, who are being directly affected by poor leadership,

arrogant management and the pursuit of private interests by university officials. This further exacerbates the critical situation and, as a result, many universities are about to collapse due to these problems. Hence, reform is urgently needed to remedy the situation. However, I would not like to see this reform being run by the same people who have caused the



The picture shows the newly acquired building of the International Faculty of Engineering (IFE) at the Technical University of Łódź in Łódź, Poland.

problems as we can only expect *more of the same* as the outcome!

There are still universities in the world where academic freedom, democracy and tradition are being upheld, with university officers being elected by their peers rather than appointed, thus preventing those *fellow travellers* from coming to one university for a few months and immediately start searching for a better position elsewhere. We can see the difference in the behaviour of ordinary academics



in such places, where many commit themselves strongly to the university, treasure the association with the place, believe in its authorities, and receive motivation and support for their endeavours.

One of the good examples I can quote here is the development of the International Faculty of Engineering (IFE) at the Technical University of Łódź in Łódź, Poland, where against all the odds, with the constant struggle for funds, modern ideas are being developed because the people believe in them, and the University authorities feel obliged to help achieving them. The photo on the first page shows the newly acquired building of the IFE, which was achieved because of the creativity, motivation and hard work of those who believe in this idea, as well as the support and encouragement of the University authorities. Readers will find more about this venture elsewhere in this Newsletter.

11th Baltic Seminar

Initially planned to be held at Tallinn University of Technology (TUT) in Tallinn, Estonia, the *11th Baltic Region Seminar on Engineering Education* was moved to the centre of Tallinn to be held at the Uniquestay Mihkli Hotel, which provided the excellent venue for this gathering of international academics. Close to 40 academics and accompanying persons registered at this Seminar.

The Seminar was officially opened by the Chairman of the UICEE Academic Advisory Committee (AAC), Prof. Harold P. Sjursen, Associate Provost of Polytechnic University in Brooklyn, New York, USA, with the UICEE Director introducing the Seminar, its programme and objectives. There were two opening addresses: the first was delivered by Prof. Daryl G. Boden on the *Conceive – Design – Implement – Operate* (CDIO) Syllabus, while the second was given by A/Prof. Vanda B. Ginevičienė on a unified higher education system in Lithuania. Both addresses stimulated useful discussion and questions from the floor.

It is disappointing to



The photo shows the three proud Silver Badge awardees (l-r): Prof. G. Metaxas, A/Prof. V.B. Ginevičienė and Mr S. Thatcher.

report that none of the engineering educators in Estonia decided to take advantage of this tremendous opportunity to attend the Seminar, present their research and development achievements, and interact with so many reputable international engineering educators.

On the occasion of the Seminar Gala Banquet, held on Tuesday, 19 June, the UICEE Director was proud to present 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. This was awarded to A/Prof. Vanda B. Ginevičienė of Vilnius Gediminas Technical University, Vilnius, Lithuania; Mr Steven Thatcher from the University of South Australia in Adelaide, Australia; and Prof. George Metaxas of the Technological Education Institute of Piraeus in Piraeus - Athens, Greece.

Staff and students of the UICEE congratulate these dynamic academics for their educational efforts that have merited this award.

The top picture shows the three delighted awardees of the Badge of Honour with the bottom picture showing A/Prof. Ginevičienė presenting a short thank you note.

A volume of Seminar Proceedings has been produced featuring 35 informative papers in which the authors present and discuss their research activities and achievements carried out in order to improve the status and quality of engineering education in their academic institutions, as well as globally. It is believed that the papers cover a wide range

of aspects of engineering education and training, and have been arranged in thematic chapters.

UICEE Best Paper Awards were awarded to those papers that were considered to offer the most significant contribution to the field of engineering and technology education, and were delivered at the 11th Baltic Seminar. The papers were selected by registered Seminar participants on the basis of the greatest frequency of recognition in a popular vote in five selected award categories: Diamond, Platinum, Gold, Silver and Bronze. However,



The photo shows A/Prof. V.B. Ginevičienė giving her short thank you speech at the 11th Baltic Seminar Gala Banquet.

the composition and spread of votes from the Seminar reduced this to four categories.

The UICEE Diamond Best Paper Award was conferred on Ms D.Q. Nguyen and Prof. Z.J. Pudlowski, Monash University, Melbourne, Australia, for their paper titled *Current issues and trends in the inevitable internationalisation of engineering education in Australia*. Two UICEE Platinum Best Paper Awards were accorded to those papers with the next highest count, both receiving the same number of votes. These papers were, in no particular order: *Using rubrics to assess the development of CDIO Syllabus personal and professional skills and attributes at the 2.x.x level* by Prof. D.G. Boden and Prof. P.J. Gray, and *Scenario-based assessment in aviation education* by Mr S. Thatcher. Because there were two Platinum Awards, it was decided by the Voting Committee that the next level be Silver. This was accorded to Mrs E.A. Danilova and Prof. Z.J. Pudlowski for their collaborative paper entitled *Improving the acquisition of communication skills by engineers*. It should be noted that the UICEE Director did not accept these awards because of his position.

Of note is that the UICEE staff and students contributed significantly to this Seminar by authoring four papers concerning their research. Two of these four papers scored awards. The photos on this page show Ms Nguyen and Mrs Danilova presenting their individual award papers at the Seminar.

It is envisaged that expanded and revised versions of these very interesting award papers will be included in a forthcoming issue of the UICEE's *Global Journal of Engineering Education*. Staff, students and associates of the UICEE wish to congratulate the distinguished awardees on their praiseworthy achievements.

Activities in Russia

The visit to Russia of Mrs Elena A. Danilova, a Project Officer and a PhD candidate within the UICEE, in late June/early July 2007 had an objective to encourage and stimulate the involvement of some Russian technical universities in the UICEE's activities. Her first engagement was an official visit to Moscow Aviation Institute (MAI) in Moscow to have a meeting with Dr Alexander K. Kalliopin, Vice-Rector for International Affairs, and Dr Irina G. Anikeeva, Vice-Dean of the School of Languages. The immediate outcome of the meeting was a collection of data for Mrs Danilova's PhD research; also, she had the opportunity to

discuss the possibility of collaboration in future joint research and development projects and other academic ventures.

It should be pointed out that this visit was facilitated by Prof. Alexei F. Nesterov, General Director of the Association of Engineering Universities in Russia (AATR), who also accompanied Mrs Danilova on this visit. Later that day, in honour of Mrs Danilova, Prof. Nesterov and his wife Galina hosted a working dinner where, in a cordial atmosphere, they discussed a variety of issues concerning engineering education and further potential collaborations with the UICEE.

The next official visit was to the Southern Federal University (SFU) in Rostov-on-Don, a potential new member of the UICEE. During the meeting with Prof. Vladimir V. Zhukov, Head of the International Affairs Department,

and Dr Mikhail I. Mazuritsky, Head of the Laboratory for Adaptive Computer Technologies and Educational Systems (LACTES), various issues were raised such as the international activities and teaching/learning methods used at the SFU. The SFU is a structurally new educational institution in the North-Caucasian Region of Russia, consisting of four big tertiary educational institutions such as Taganrog State University of Radio-engineering, the Institute of Architecture and Art,



UICEE staff present their papers at the Baltic Region Seminar. The left photo shows Ms D.Q. Nguyen, while the right photo shows Mrs E.A. Danilova.

the Pedagogical University and Rostov State University, which were recently merged into one organisation. Major discussions at the SFU concerned the potential partnership of the SFU with the UICEE and joint activities like the organisation of the 5th Russian Seminar on Engineering Education, likely to be held in Rostov-on-Don and Taganrog in September next year.

At the SFU, Mrs Danilova also had a meeting with Prof. Olga I. Safronenko, Head of the Department for English Language Teaching, and Prof. Anatoly V. Nasedkin, Deputy Head of the Scientific Research Institute for Mechanics and Applied Mathematics. The objectives of these discussions were to learn and gather information on research, development and education, especially concerning English as a Second Language (ESL) and English for Specific Purposes (ESP), as well as conducting possible joint projects in this area of academic endeavour.

Next on the agenda was an official visit to Taganrog State University of Radio Engineering (TSURE), Taganrog, Russia, which is a Contributing member of the UICEE. Mrs Danilova had the opportunity of meeting Prof. Irina A. Tsaturova, Head of the Linguistic Department at the TSURE, in order to discuss potential research collaboration

and possible future joint activities, as well as to collect essential data for her PhD research. A meeting with Prof. Vadim P. Popov, Vice-Rector for International Affairs at the TSURE, was with the objective to facilitate collaboration in the organisation of the 5th Russian Seminar on Engineering Education.

An official visit to Tomsk Polytechnic University (TPU), located in Tomsk in Western Siberia, which is a longstanding Partner institution of the UICEE, included meetings with Prof. Alexander I. Chuchalin, Vice-Rector for International Affairs; A/Prof. Sergey B. Mogilnitsky, Deputy First Vice-Rector of the TPU and Deputy Director of the *Central Asia Centre for Engineering Education (CACEE)*, a satellite centre of the UICEE, and Ms Margaret M. Vorobieva, Secretary of the CACEE. The discussions included the organisation of the 5th Russian Seminar. It is envisaged that the Russian Association for Engineering Education (RAEE), whose headquarters are based at the TPU, would also be involved in this venture. Mrs Danilova also paid a visit to the Institute for International Education, Languages and Communication of the TPU. The objective of that visit was to gather information on research, development and education, especially concerning ESL and ESP for students taking engineering and technology courses.

Tomsk State University of Control Systems and Radioelectronics (TSUCSR), Tomsk, was the next institution to be visited. A meeting with Prof. Mikhail T. Reshetnikov, Vice-Rector for Academic Affairs of TSUCSR, and Prof. German S. Sharigin, Head of the Radiotechnical Systems Department, involved comprehensive discussions on the possibility of the TSUCSR joining the UICEE, and engaging in UICEE research and development activities. Mrs Danilova also had a meeting with A/Prof. Nina D. Kovalenko, Head of the Foreign Languages Department, in order to learn about their research and, also, to gather information on ESP teaching and learning at the TSUCSR.

Her last brief visit to Tomsk State University, Tomsk, was to be engaged in a meeting with A/Prof. Oksana V. Sarzhina, a lecturer at the Department of Romano-Germanic Philology, in order to conduct her research on ESP and gather relevant research data.

OAC Appointment

We are pleased to inform our readers that the UICEE Director, Prof. Zenon J. Pudlowski, was appointed to the Register for External Reviewers of the Oman Accreditation Council (OAC) as of 1 August 2007 with the appointment lasting three years.

The OAC is being chaired by His Excellency Dr Hamed Al-Dhahab, Minister for Higher Education in the Sultanate of Oman, and includes prominent figures from the education and business sectors of the country.

The objective of the OAC is to assist in the development of Omani higher education by utilising institutional quality audits and implementing institutional and programme accreditation processes. In collaboration with the Ministry of Higher Education, the OAC has the responsibility to establish academic standards plus facilitate training and networking opportunities. The OAC is in charge of the external quality assurance of higher education providers and programmes in Oman. All parties will work together in unison to continue to build on their collective strengths for the benefit of the higher education sector in Oman.

Our readers may recall that in February 2006, the UICEE held its successful 9th Annual Conference with the Caledonian College of Engineering (CCE), a Partner institution of the UICEE in Oman, acting as host, principal co-sponsor and co-organiser. It should be emphasised that the CCE Principal and Dean, Prof. Frank McIntosh, was instrumental in ensuring the success of this meeting.



The photo shows Prof. Ákos Rédey (r) engaged in discussions with the UICEE Director during his visit to Veszprém.

European Tour

The European tour of the UICEE Director in June/July had the objective of reinforcing ongoing UICEE contacts and partnerships with several European institutions, as well as exploring the possibilities of establishing new contacts and ventures.

Veszprém

The first visit on the Director's European Tour was to the University of Pannonia in Veszprém, Hungary, a Contributing member of the UICEE, where the UICEE Director had the opportunity to meet with the newly elected Rector of the University, our close friend and cooperator, Prof. Ákos Rédey.

Several issues of mutual interest were discussed, such as future collaboration and partnership between the two institutions, and the possibility of staging the 11th UICEE Annual Conference on Engineering Education in Veszprém. Rector Rédey has indicated that his University would provide substantial human and financial support should this international event be staged in Hungary.

The picture shows Prof. Rédey and the UICEE Director engaged in cordial and productive discussions over a working dinner.

Kraków

The next visit was to the AGH University of Science and Technology in Kraków, Poland, and in particular to its Department of Electrotechnics. Several working sessions were carried out with the Head of the Department, Prof. Stanisław A. Mitkowski, on research collaborations and future joint activities, including the possibility of running an international conference in Kraków in the near future.

A meeting with the University Vice-Rector, Prof. Jerzy Lis, Prof. Mitkowski, Prof. Janusz Szpytko and the UICEE Director took place in the office of the Vice-Rector on 12 July 2007 where many issues of mutual interest were raised and discussed, including the possibility of bilateral collaboration and the involvement of other Partner institutions in Europe. The top photo shows the four participants involved in this meeting.

While in Kraków, the UICEE Director had the pleasure of meeting representatives of the Board of European Students of Technology (BEST) from the AGH University branch, specifically two undergraduates at the AGH University: Ms Paulina Grunwald and Stanislaw Vinarski, the latter originally from Belorussia, both representing External Relations.

The BEST is an organisation that is concerned about programmes of students engaged in studies in technology at European universities with about 70 cells based in various academic institutions in Europe.

The discussion centred on explaining what the two organisations are about and other issues in engineering education. Higher on the agenda of this meeting was the possibility of the UICEE assisting the BEST organisation at AGH University in their activities and to fulfil their objectives. The participation of several BEST students at one of the UICEE-run conferences to be organised in Europe, where students can present their views on engineering education and the future of programmes in engineering and technology education, was one of the discussion items.

Łódź

After a long absence of about 10 years, the UICEE Director was invited to visit the Technical



The photo shows (l-r) Prof. S.A. Mitkowski, Prof. J. Szpytko, Prof. J. Lis and Prof. Z.J. Pudlowski at their meeting in Kraków.

UNESCO Headquarters in Paris, France, the then and current Rector of the TUL, Prof. Jan Krysiński, who responded positively to this idea.

In June 1992, an international seminar dedicated to the establishment of the IFE was held in Poland with about 15 international and over 60 local academics. The immediate outcome of this seminar was the founding of the IFE with UICEE Director appointed the Foundation Dean and a University professor (in absentia) for the period of three years and with Dr Tomasz Saryusz-Wolski as the Vice-Dean of the IFE, acting in absence of the Dean.

Enormous help, advice and assistance was provided to the development of this idea by the then Vice-Rector of the TUL, Prof. Janusz Turowski, without whom this Faculty would not have been developed, so much so that the first admission of students was from 1 October 1993 with close to 30 students in one engineering specialty called electro-mechanical engineering (mechatronics).

It should be pointed out that over one million dollars was received from the then Australian Counterpart Fund administered by the Australian Embassy in Poland, allowing the purchase of a historical building, which served as its first base of the IFE, and the sponsorship of many facilities such as computers, the library, etc, acquired from this fund.

The bottom photo shows Prof. J. Turowski and UICEE Director during one of his working visits to the IFE in winter 1993. In the background is the IFE-owned historic building.

After the initial four years of operation, the enterprise was converted to a centre for international engineering education. However, it retains its original name of IFE in its English translation. Also, the range of educational programmes has gradually



The wintery photo shows Prof. J. Turowski (r) and Prof. Z.J. Pudlowski (l) before the IFE's historic building.

expanded with the addition of several programmes and a few programmes in the French language as the main medium of instruction.

It is the enormous skills, commitment and ingenuity of the Director of the Centre, Dr Saryusz-Wolski, that the IFE has developed into one of the leading European institutions with engineering teaching engaging in foreign languages. On the 15th anniversary of the establishment of the

IFE, it has acquired a building (pictured on the first page) that allows for close to 1,000 students to have effective and elegant study facilities, as well as social rooms and a conference facility to cater for 200 participants. This building was supported by the European Union (EU) to the tune of about 3.5 million Euro.

It was against this background that the visit of the UICEE Director was hosted by the University authorities, including its Rector, Prof. Jan Krysiński, two Vice-Rectors, Prof. Stanisław Bielecki and Prof. Andrzej Napieralski, and the IFE Director, Dr Tomasz Saryusz-Wolski. Prof. Em. Janusz Turowski was also invited to the meeting. The top photo shows the participants of the meeting in the Rector's office.

The discussion carried out during the meeting reflected on the past as well as touched on the present and future challenges and opportunities, where the UICEE Director was invited to contribute further to the success of the IFE. Further, Prof. Pudlowski visited several units including the new IFE building.

We all wish to congratulate the University, its officials and, indeed, Dr Saryusz-Wolski for this outstanding achievement in developing such an important academic unit which contributes strongly to the modern education process of international engineers.

Gdynia

On 16 and 17 July 2007, the UICEE Director had the pleasure to visit Gdynia Maritime University (GMU) in Gdynia, Poland, which is a longstanding Partner institution of the UICEE and the host of the Centre for



The photo shows (l-r) Prof. Em. J. Turowski, Prof. S. Bielecki, Dr T. Saryusz-Wolski, Prof. Z.J. Pudlowski, Prof. J. Krysiński and Prof. A. Napieralski at the TUL meeting.

opening its global reputation as a leading force in global maritime education with over 7,000 undergraduate and post-graduate students enrolled at the University. The GMU is famous for its modern approach to the training of seafare and off-shore personnel through the application of technologies and methods, such as simulation, with its in-house developed programs and software.

In cordial and friendly discussions, several existing activities were reviewed and the potential future expansion of programs and software identified and discussed.

The bottom photo shows the two key officials of the University.

Szczecin

On Tuesday, 17 July, the UICEE Director stopped overnight in Szczecin, Poland. This permitted him to have a working dinner with Dr Jacek Batóg of the University of Szczecin (USz). The two parties briefed each other of their progress in their activities, as well as the outcomes of the 10th Baltic Region Seminar on Engineering Education and the 2nd Baltic Business Development

Conference, which were held there in September last year. Several areas for potential cooperation were identified and discussed with the view of the USz supporting the UICEE's efforts in Europe.

Of note to our readers is that the USz is opening an undergraduate programme called *Internet Engineering* and this is where the UICEE and its members may assist the University.



The photo shows (l-r) Prof. R. Cwilewicz with Prof. J. Lisowski at Gdynia Maritime University.

Berlin

The 18th and 19th of July saw the meetings with several academics at the Fachhochschule für Technik und Wirtschaft Berlin – University of Applied Sciences (FHTW) in Berlin, Germany, including Prof. Hans-Herwig Atzorn, the First Vice-President, and Prof. Jürgen Sieck.

During the cordial discussions in the office of Prof. Atzorn, several key issues concerning international as well as German engineering education were elaborated on, including the possibility of the FHTW joining the UICEE in its endeavours. The UICEE Director also had the chance to inspect the teaching facilities with the view of staging a major international conference in Berlin in 2008 in collaboration with the FHTW. It is envisaged that further activities concerning these matters will be taken up in the near future. This visit to Berlin concluded the European tour of the UICEE Director.

The photo shows Prof. Sieck, Prof. Atzorn and the UICEE Director engaged in friendly discussions.

ILG-EE Meeting

The 19th General Meeting of the International Liaison Group for Engineering Education (ILG-EE) was conducted on Sunday, 17 June 2007, the day preceding the opening of the 11th Baltic Region Seminar on Engineering Education held in Tallinn, Estonia. This meeting was held at the Seminar venue, the Uniquestay Mihkli Hotel.

Various matters of importance were raised including membership and the ILG-EE's activities in 2007, as well as the prospects for 2008, including the locations of forecast conferences run by the UICEE. The venue for the next ILG-EE meeting was still to be determined although it was suggested that it be carried out in conjunction with the 5th Asia-Pacific Forum on Engineering and Technology Education, expected to be held in India later this year.

Global Journal Update

The latest Issue of the *Global Journal of Engineering Education* (GJEE), Vol.11, No.1, showcases 10 new and original articles that have been invited from researchers who have significantly contributed to UICEE publications over the years. This Issue is in recognition of their sterling efforts and active pursuance of research in the diverse and vital area of engineering education. Also included is a revised award paper from a previous UICEE conference.

It should be noted that the first 10 volumes of the GJEE, comprising 30 issues in total, have been posted for free access on the UICEE's Web site, thereby contributing to the global advancement of engineering education and consolidating international research in this important and evolving field for the benefit of academics, students and administrators around the entire world.

World Transactions

The latest issue of the *World Transactions on Engineering and Technology Education* (WTE&TE), that is Vol.6, No.1, is now in circulation. This Issue collects 40 highly informative and diverse articles from



The photo shows (l-r) Prof. J. Sieck, Prof. H-H. Atzorn and the UICEE Director during their meeting in Berlin.

contributors based in 14 countries around the world, many of them collaborative efforts, which tackle burning issues concerning the wide spectrum of engineering and technology education. It should be noted that the WTE&TE, as with all UICEE publications, only publishes peer refereed papers.

The next Call for Papers for Vol.6, No.2 of the WTE&TE has a deadline of 30 September 2007. UICEE members and Newsletter readers are encouraged to take up this opportunity

and publish their original material in the World Transactions. The electronic kit for authors will be sent on request from Mr Marc J. Riemer of the UICEE on: uicee@eng.monash.edu.au

Further details can be found at the UICEE Web site under *World Transactions on Engineering and Technology Education*, including the first four volumes of the WTE&TE available for free access. The abstracts of later issues have also been posted. This enhances the UICEE's distribution of refereed published information on engineering and technology education, providing the wider availability of such education materials for every educator and student, as well as other interested parties, around the globe.

Upcoming UICEE Conferences

The 5th Asia-Pacific Forum on Engineering and Technology Education is scheduled to be held in Agra, India, from 27-30 November 2007. Anand Engineering College (AEC), Keetham, Agra, India, is the host and co-sponsor of this Forum. At this stage, the UICEE is collecting paper proposals for this event and the decision to proceed with the Forum will depend on the

outcome of the number of proposals received.

The dates for the 2nd North African Region Seminar on Engineering and Technology Education, planned to be held at the University Mohamed Boudiaf in M'sila, Algeria, have been changed due to some unexpected circumstances. This Seminar has instead been moved to take place from 12-14 November 2007.

The University of Science and Technology Houari Boumediene (USTHB), a Partner member of the UICEE, and specifically the North Africa Centre for Engineering & Technology Education (NACETE), the UICEE satellite centre there, are the sponsors and organisers of this Seminar. This initiative is being driven by Prof. Khedidja Allia, Director of the NACETE, who will be more than happy to facilitate the participation of interested parties.

Ron Ward Honoured

On 24 May 2007, Dr Ronald B. Ward visited the offices of the UICEE with his wife Brenda on the invitation of the UICEE Director. Dr Ward has demonstrated



The photo shows (seated, l-r) the awardee Dr Ron Ward with his wife Brenda, with the UICEE Director standing behind.

a diverse yet focused approach and drive to engineering education, and he has sought to provide a broad and relevant education suitable for engineering students.

On this occasion, Dr Ward was awarded the UICEE Silver Badge of Honour for his outstanding contributions to the body of knowledge in engineering education concerning relevant and current topics such as management skills for engineers, mentoring, problem-solving competences, time management, legal and judgement issues, power and responsibility, leadership, risk management, and occupational health and safety awareness. This

includes the development of engineering management case studies that he wrote as assignments for students.

Dr Ward has a commendable history of working in several industries, including consultancy, and has contributed academically to educational institutions in Sydney.

With the acceptance of this award, Dr Ward joins the ranks of esteemed international engineering educators who have contributed to the global corpus of research in engineering education and the development of the UICEE.

The photo shows Dr Ward and his wife with the UICEE Director.