



UNESCO International Centre for Engineering Education



Newsletter

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From the Director

The establishment of the *UICEE Global Network of Engineering Education*, with numerous Partner institutions and, indeed, the UICEE satellite centres based at those institutions, has considerably increased the number of activities and their impact on the regional scenes. Over the last few years, some of the Partner institutions have undertaken research and promotional activities in engineering and technology education, with many international conferences being organised in order to stimulate activities in their respective regions. These conferences should be regarded as an extension of the *UICEE arm* in order to reach those engineering educators who would otherwise have not had the opportunity to participate in such activities and ventures.

It should be pointed out that this regional group of *quiet achievers* has been instrumental in spreading the UNESCO *gospel* of engineering education among the wider population of academics, with no burden or cost to UNESCO. Taking into account the level of difficulties that they may have encountered in promoting engineering education in their regions, they should indeed be thanked for their tremendous efforts. They do this work without financial rewards or remuneration because they *believe* in the need for advancing engineering education globally.

The second important issue is the involvement of younger academics in engineering education research, development and application.

Unfortunately, most of the present university appraisal systems do not reward engagement in this field of academic endeavour. However, there is an urgent need for the younger generation to take control of pedagogical advancement so that the proverbial *ship* sails to a better future.

The recent 9th *Baltic Region Seminar on Engineering Education* was an exceptional event in the sense that many younger academics took an active part in this Seminar, and this is a vital aspect that should be welcomed, praised and strongly supported.

The picture on the last page shows Mrs Elena A. Danilova from Tomsk Polytechnic University, Tomsk, Russia, in her shy and cautious endeavour to take control of the tallship's steering wheel. Let us hope that there will be many more efforts made to join in advancing engineering education, by charting the *ship's voyage* to new and adventurous seas, full of opportunities.



The picture shows Monash University Chancellor, Mr Jeremy K. Ellis (l) with Prof. Peter LeP. Darvall at the graduation ceremony (photo by Melissa Di Ciero).

Award for UICEE Chairman

Emeritus Prof. Peter LePoer Darvall, the immediate past Vice-Chancellor & President of Monash University, Melbourne, Australia, and Chairman of the Academic Advisory Committee of the UNESCO International Centre for Engineering Education (UICEE), received his Doctor of Laws degree, *Honoris Causa*, on 19 May 2005.

The photo on this page shows the proud awardee with the Monash University Chancellor, Mr J.K. Ellis, at the graduation ceremony.

Prof. Darvall has had an esteemed career in engineering and science, working in industry before undertaking academic duties, notably progress-

ing from the role of the Dean of the Faculty of Engineering at Monash University, to the Deputy Vice-Chancellor (Research & Development), to the Vice-Chancellor & President. Prof. Darvall has also displayed extensive community involvement and engagements with industry.

He has always shown a drive and passion



UICEE Partners



for engineering education, evidenced by his former position as President of the Australasian Association for Engineering Education (AAEE), between 1991 and 1995, and currently being the Chairman of the International Liaison Group for Engineering Education (ILG-EE).

The UICEE staff, students and associates wholeheartedly congratulate Prof. Darvall on this award, which complements his diverse, effusive and knowledgeable career, and is an expression of his exemplary and outstanding service to Monash University and its academic community.

The photo on this page shows Prof. Darvall and Mrs L. Darvall accompanied by the UICEE staff at the graduation ceremony.



The photo shows (l-r): Mr A.S. Patil, Mrs L. Darvall, Mr M.J. Riemer, Prof. P. Darvall, Ms D.Q. Nguyen and Prof. Z.J. Pudlowski (photo by M. Di Ciero).

9th Baltic Seminar

Gdynia in Poland provided the exciting settings for the 9th Baltic Region Seminar on Engineering Education, held at Gdynia Maritime University (GMU) between 17 and 20 June 2005. The Seminar was held in conjunction with the celebrations of the 85th anniversary of maritime education in Poland, particularly the GMU, a Partner institution of the UICEE, which also celebrated 85 years of academic development.

The impressive formal ceremony that constituted the *Gala Celebrations of the 85th Anniversary of the GMU* was well-attended by local and international dignitaries, who were officially recognised by the Rector of the GMU, Prof. Józef Lisowski, in his welcome speech.

Additionally, it was during this event that the UICEE Director received a special celebratory medal commemorating the 85th Anniversary of the GMU.

The Opening Ceremony of the 9th Baltic Seminar immediately followed this significant event. The photo shows Prof. Romuald Cwilewicz, Vice-Rector for Education and Training at the GMU, officially welcoming participants and guests of the 9th Baltic Seminar (left), with, seated (l-r) the UICEE Director, Prof. Henryk Śniegocki, Vice-Rector for Maritime Affairs, Prof. Józef Lisowski, Rector, and Prof.



The photo shows (l-r): Prof. R. Cwilewicz, Prof. Z.J. Pudlowski, Prof. H. Śniegocki, Prof. J. Lisowski and Prof. J. Kubicki at the Opening Ceremony (photo by Tomasz Degórski).

Jerzy Kubicki, Vice-Rector for Research and Development. The GMU Rector later delivered an insightful address entitled: *Gdynia Maritime University: organisation and activity programmes in education and research* during the Opening Address Session.

Two prestigious UICEE Badges 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 were presented to two GMU outstanding academics during the Opening Ceremony of the 9th Baltic Seminar. The UICEE Gold Badge of Honour was bestowed up Prof. Józef Lisowski, Rector of the GMU. The UICEE Silver Badge of Honour was presented to Prof. Henryk Śniegocki, a Vice-Rector of the GMU. The picture next page in the centre shows Prof. Lisowski receiving his award at the Opening Ceremony of the 9th Baltic Seminar.

Over 50 participants attended the Seminar, with 50 full and internationally peer-refereed papers incorporated in the volume of Proceedings that, it is envisaged, will be a valuable source of reference for years to come.

Excellent early summer weather and a diverse and inclusive social programme facilitated an excellent level of interaction between participants. This contributed to the friendly nature of the Seminar in promoting future collaborative projects between delegates. The social programme included the Sunday voyage on the GMU's tallship, *Dar Młodzieży*, including GMU staff, guests, students and the crew. The photo next page at top shows some of the participants of the 9th Baltic Seminar gathered at the bow of the ship for a group shot.

Safe travel was most ably carried out under the guidance of Captain Leszek Wiktorowicz. Cruises on this

impressive sailing ship had been attempted twice before on previous UICEE-run conferences, but bad weather prevented a sea voyage from being undertaken. The photo next page at bottom shows the ship Captain, L. Wiktorowicz, with Prof. R. Cwilewicz, the UICEE Director, and Prof. N. Grünwald.

The Seminar Proceedings, produced after the Seminar, include papers presented at the Seminar, and cover a diverse range of issues and topics in engineering education.

Copies of the Proceedings can be purchased from the UICEE.

Best Paper Awards

At the Closing Ceremony of the 9th Baltic Region Seminar on Engineering Education, held in Gdynia, Poland, on 20 June 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 9th Baltic Seminar. Importantly, 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, namely: Diamond, Platinum, Gold, Silver and Bronze.

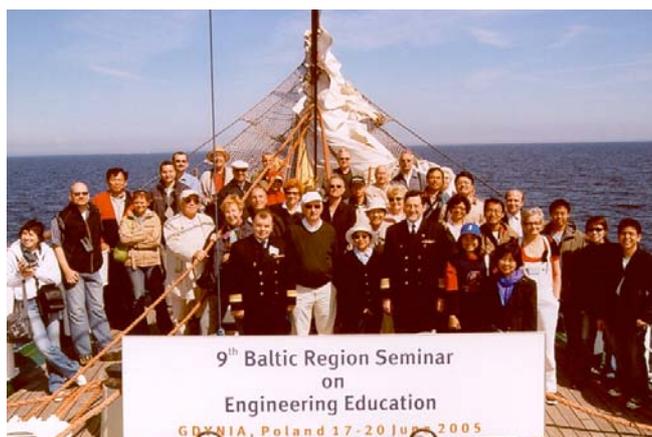
The UICEE Diamond (First Place) Award was presented to A.I. Chuchalin and E.A. Danilova from Tomsk Polytechnic University, Tomsk, Russia, for their Lead Paper entitled: *Integrating the Web into ESP teaching at Tomsk Polytechnic University*.

Two equal UICEE Platinum (Second Place) Awards were presented on this occasion. The first Platinum award was awarded to L. Tomczak of Gdynia Maritime University, Gdynia, Poland, for his paper called: *Practical aspects of 3D graphical applications in a marine engine room simulator*. The second Platinum Award was bestowed upon R. Pawletko, also of Gdynia Maritime University, for his paper titled: *The use of the automatic faults classification method in technical diagnostic education of marine engineers*.

As there were two Platinum Awards, no Gold Award was presented at the Seminar.

The UICEE Silver (Fourth Place) Award was presented to S. Kluj from Gdynia Maritime University for his paper entitled: *A diesel engine fault simulator applied to engineering training*.

The Award Committee



A group photo of participants of the 9th Baltic Region Seminar on Engineering Education on the cruise (photo by T. Degórski).

education to lead the nanotechnology revolution.

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



Prof. J. Lisowski (r) receives the UICEE Gold Badge of Honour from the UICEE Director (photo by T. Degórski).

5th Global Congress

We are delighted to announce that the 5th Global Congress on Engineering Education is scheduled to be held in Piraeus-Athens, Greece, between 17 and 21 July 2006. This prestigious event is being sponsored and organised by the UICEE, with the Technological Education Institute of Piraeus (TEI-Piraeus), Piraeus-Athens, Greece, as the host and Principal Co-sponsor.

The objective of the Congress is to bring together educators, professional organisations and industry leaders from around the world to continue the dialogue about important issues and challenges in engineering and technology education for the 21st Century. The

Congress will address experiences and ideas within the international community in the context of rapidly changing technology and production processes.

The venue of the TEI-Piraeus lies close to the natural harbour of Piraeus and the beaches to the south. It lies in the middle of an olive grove that includes some of the very same olive trees that once shaded Plato's Academy, then situated nearby. Athens itself has been inhabited for over 4,000 years,



The photo shows happy participants of the cruise (l-r): Prof. R. Cwilewicz, Prof. Z.J. Pudlowski, Capt. L. Wiktorowicz and Prof. N. Grünwald (photo by T. Degórski).

giving rise to what is known today as Western Civilisation.

Already, submissions of interest have been received for what promises to be a major event for engineering educators around the world. More information can be found on the UICEE Web site under *Conferences and Meetings*.

2nd Mediterranean Seminar

The 2nd Mediterranean Seminar on Engineering Education (2MSEE), under the patronage of the President of the Democratic and Popular Republic of Algeria, His Excellency Abdelaziz Bouteflika, was held in Algiers, Algeria, between 29 and 31 May 2005.

This was organised by the *North African Centre for Engineering Education* (NACETE), a satellite centre of the UICEE, and staged at the University of Science & Technology *Houari Boumediene* (USTHB), a Partner member of the UICEE. The 2MSEE was jointly sponsored by the UICEE and USTHB.

The Opening Ceremony was opened by the Seminar Chairman and NACETE Director, Prof. Khedidja Allia, and was attended by such distinguished guests as Prof. Rachid Haraoubia, the Minister of Higher Education and Scientific Research; Dr Chakib Khellil, the Minister of Energy and Mines; Prof. Souad Bendjaballah, the Minister Delegate of Scientific Research.

The Seminar brought together educators and engineers from industry and professional organisations from 15 countries, including the Mediterranean region and all over the world.

A Silver Badge of Honour was presented to Prof. Benali Benzaghrou, Rector of the USTHB, for his outstanding contributions to global engineering education and to the achievements of the UICEE, in particular. The photo this page shows Prof. Benzaghrou receiving his award during the Opening Ceremony of the Seminar from the UICEE Director.

The Seminar marked a special occasion for the establishment of the NACETE Academic Advisory Committee (AAC), with the election of Mr Brahim Ouarets, President Director-General of Telecom Algeria, as its Chairman. Two newly elected Vice-Chairmen were also appointed, namely: Prof. Nejla R. Bouden of Tunisia, and Prof. Djillali Benouar of Algeria.

The Seminar concluded with a visit to the Senate, where the President of the Algerian Senate, His



Prof. B. Benzaghrou (r) receives the UICEE Silver Badge of Honour from the UICEE Director.

Excellency Abdelkader Bensalah, received some of the Seminar participants. The photo shows (l-r), the UICEE Director, Prof. Zenon J. Pudlowski; Prof. Khedidja Allia; His Excellency Abdelkader Bensalah and Prof. Benali Benzaghrou.

A handsome Volume of Proceedings was produced, incorporating 43 papers from the Seminar.

4th Asia-Pacific Forum

Organisation of the 4th Asia-Pacific Forum on Engineering and Technology Education, which is scheduled to be held between 26 and 29 September 2005 in Bangkok, Thai-

land, at the popular *Menam Riverside Hotel*, is well underway.

Considerable interest has already been shown from around the world, especially Asia.

An excellent accommodation package has been organised in a city of wonderful diversity that provides an excellent meeting point for Central and Eastern Asia, as well as being an easy destination to get to for international guests. More information concerning this exciting event, can be found on the UICEE Web site under *Conferences and Meetings*, in the Forum Preliminary Programme.

It should be noted that, as the Proceedings will be published after the Forum, UICEE members, associates and other potential participants may still wish to attend the Forum and propose a late paper.

9th UICEE Annual Conf.

Preparations are well underway for the 9th UICEE Annual Conference on Engineering Education, to be held in Muscat, Sultanate of Oman, between 11

and 15 February 2006, with Caledonian College of Engineering (CCE), a Partner institution of the UICEE, taking on the role of the Principal Co-sponsor and Co-organiser. The Conference venue and accommodation will be the *Crowne Plaza Hotel*, a 4* deluxe hotel located in an excellent position in Muscat.

The prime objectives of the Conference are to bring together partners, members, associates, students and supporters of the UICEE from all



At the Algerian Senate are (l-r): Prof. Z.J. Pudlowski, Prof. K. Allia, the President of the Algerian Senate, His Excellency Abdelkader Bensalah, and Prof. B. Benzaghrou (photo by H. Mimoun).

over the world and to continue discussions on issues of importance to engineering education. To debate the activities of the UICEE and to foster friendships already established are also important objectives of the Conference. Moreover, it is anticipated that this Conference will further enhance the UICEE's links and networks, and will set the stage for more innovative and collaborative ventures.

Caledonian College of Engineering, formed in 1996, is the prime specialist engineering University College in the Sultanate, and offers a range of UK awarded Honours Degree programmes, fully recognised in the Sultanate of Oman and internationally. The CCE also houses the *Gulf Centre for Engineering Education* (GCEE), a satellite centre of the UICEE.

The CCE has negotiated an excellent deal on behalf of Conference participants with the *Crowne Plaza Hotel*, including the generous sponsorship of Galfar Engineering and Contracting LLC, for the Conference period. However, the number of rooms under this deal is strictly limited, and will be passed on to potential participants on the *first come - first get* basis.

Readers can find the Conference Call for Papers at the following UICEE home page on the Internet: <http://www.eng.monash.edu.au/uicee/meetings/9thUICEE.html>

Visit to the SUT, Gliwice

On the way from Berlin, Germany, to Kraków, Poland, the UICEE Director stopped over in Gliwice, Poland, to pay a courtesy visit to the Rector of Silesian University of Technology (SUT), Prof. Wojciech Zieliński, who, it should be noted, has been newly re-elected for his second term. During the meeting, the UICEE Director briefed Prof. Zieliński on new developments and activities of the UICEE, as well as some specific collaborative ventures between academics of the SUT and the UICEE.

The discussion also included some general issues concerning the changes to the higher education sector in Poland in light of the recommendations from the European Union (EU) concerning the establishment of the common European higher education area.

It should be mentioned at this point that the SUT is one of the leading technical universities in Poland, and is at the forefront of international involvement in activities relating to research and teaching, the mobility of staff and students, as well as the restructuring of its teaching and education infrastructure base.

While on the Gliwice campus, the UICEE Director made a brief visit to the *Centre for Education in Mechatronics* (CEM), a satellite centre of the UICEE, and visited the former Rector of the SUT, Prof. Prof. Boleslaw Pochopień, who is

currently Co-Coordinator of the UICEE Polish Network (UICEE-PN). During the friendly discussions, both parties expressed their desire to intensify the level of joint activities, particularly in relation to the UICEE-PN, which currently consists of five UICEE member institutions, among them three Polish Partner institutions of the UICEE.

Visit to Czestochowa

On Monday, 13 June 2005, the UICEE Director made an official visit to the Faculty of Management at the Technical University of Częstochowa (TUC), a Partner member of the UICEE in Częstochowa, Poland, where he was received by the Dean of the Faculty, Prof. Janusz Szopa. The objective of the visit was to summarise the joint activities undertaken so far, as well as the level of involvement in research and publication by staff members of the Faculty through the UICEE, which includes its international conferences and journals.

It should be mentioned, with satisfaction, that several members of the Faculty of Management have been involved in research in the application of management to engineering, and issues involving engineering education in particular, and have published numerous papers in UICEE conference proceedings and journals. However, greater involvement of young academics, in particular in engineering education within the scope of management, was discussed and made a priority for future agenda.

On this occasion, the UICEE Director presented Prof. Janusz Szopa with a Silver Badge of Honour for his outstanding contributions to global engineering education and to the achievements of the UICEE, in particular. The photo shows Prof. Szopa proudly receiving his award from the UICEE Director.

Prof. Pudlowski, the UICEE Director, also paid a brief visit to the office of the University Vice-Rector for Research, Prof. Maria Nowicka-Skowron, where he had the pleasure of meeting several senior University officials, including Prof. Andrzej Rusek, Vice-Rector for Education, and the newly elected Vice-Rector, Prof. Alfreda Zachorowska, who will succeed Prof. Nowicka-Skowron in her role as Vice-Rector for Research. Prof. Nowicka-Skowron will take over the role of the Dean of the Faculty of Management on 1 September 2005.

Changhua Conference

The organisation of the *2nd North-East Asia International Conference on Engineering & Technology Education*, which is being convened under the theme *The Development Strategies and Challenges of Technology and Engineering Education in the Knowledge*



Prof. J. Szopa (r) receives the Silver Badge of Honour from the UICEE Director.

Economic Era, is well underway and will be held at the College of Technology at the National Changhua University of Education in Changhua, Central Taiwan, between 11 and 15 December 2005.

This Conference seeks to bring together partners, members, associates, students and supporters of the UICEE, as well as other scholars from around the world, to continue discussions on issues of importance in engineering, technology and vocational education. The Call for Papers can be found on the UICEE Web site under *Conferences and Meetings*.

World Transactions

The deadline of 30 September 2005 for the next issue of the *World Transactions on Engineering and Technology Education (WTE&TE)*, Vol.4, No.2, presents

an excellent opportunity for UICEE members and UICEE Newsletter readers to publish their original material in the *World Transactions*. Indeed, several early submissions have already been received.

The electronic kit for authors will be sent on request from Mr Marc Riemer of the UICEE on: marc.riemer@eng.monash.edu.au

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

Readers should also be aware that the first volume of the WTE&TE is now available for free access on the UICEE Web site, thereby enhancing the UICEE's dissemination of peer-refereed published information on engineering and technology education.

GJEE Update

Volume 9, Number 1 of the *Global Journal of Engineering Education* was published several months ago, and features various expanded award papers presented at two recent successful UICEE-run conferences on engineering education, namely the *8th Baltic Region Seminar on Engineering Education*, held in Kaunas, Lithuania, in September 2004, and the *8th UICEE Annual Conference on Engineering Education* held in Kingston, Jamaica, in February 2005.

It should also be emphasised here that all submissions are peer-refereed by international academics to ensure their quality and relevance for the global engineering and technology education community.

The next issue (Vol.9, No.2) is being compiled now, featuring expanded award papers and addresses from several recent UICEE Conferences, and will be ready for distribution soon.

ILG-EE Meeting

The *17th General Meeting of the International Liaison Group for Engineering Education (ILG-EE)*, originally scheduled for 16 June 2005, to coincide with the *9th Baltic Region Seminar on Engineering Education*, held in Gdynia, Poland, was unfortunately postponed due to a lack of attending members who had not yet arrived.

The next meeting has now been scheduled for 25 September 2005 to take place in conjunction with the *4th Asia-Pacific Forum on Engineering and Technology Education*, to be held in Bangkok, Thailand, in late September 2005.

Polish Students Graduate

We are pleased to announce that Ms Marta Markusik and Mr Przemysław Mateusiak, both of the Faculty of Materials Engineering and Metallurgy at the Silesian University of Technology (SUT), Gliwice, Poland, a Partner institution of the UICEE, successfully defended their Masters on 14 June 2005.

Ms Markusik's thesis was titled *Management for environmental protection in post-industrial regions*, while Mr Mateusiak's thesis was called *Research on the systems of preparation of teachers and trainers for environmental protection*. Both theses were

assessed as *very good*.

It should be noted that both students recently completed their six-month long occupational traineeships at the UICEE in Melbourne, Australia, and their projects were developed during this trainee programme. The UICEE Director, who supervised their work during their stay in Australia, was also a member of the assessment panel of the students' defence.

The graduands each presented individual papers at the *9th Baltic Region Seminar on Engineering Education*, held in Gdynia, Poland, on their respective projects undertaken while at the UICEE. The papers were summaries of their projects accomplished at the UICEE.



The photo shows Mrs E.A. Danilova ready to chart the future seas of engineering education (photo by T. Degórski).