



UNESCO International Centre for Engineering Education



Newsletter

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From the Director

Our readers may not be aware of an interesting undertaking by UNESCO, concerning the online deposition of electronic theses and dissertations.

Over the last few years, electronic theses and dissertations (ETD) programmes have been initiated and gradually developed in several countries, especially in the USA, the United Kingdom and Australia. Currently, there are numerous initiatives that cross national boundaries, including the Networked Digital Library of Theses and Dissertations sponsored by UNESCO (<http://www.ndltd.org/>). Improving the access and usability of research work and scientific development, and, more specifically, the transfer of this kind of information from developed to developing countries are the paramount objectives of UNESCO, as well as its specialised bodies and agencies, including the UICEE.

Moreover, a separate resource Internet site has been established (<http://etdguide.org/>) to guide postgraduate students, academic staff as research mentors, research deans and IT administrators, on how such research theses and dissertations can be written and developed in order to be published electronically on the Web.

In Australia, the Australian Digital Theses (ADT) programme was first developed by seven university partners and, in 2000, was opened to all Australian universities. The ADT programme (<http://adt.caul.edu.au/info/contacts.html>) is progressively developing with more than 25 universities creating a communication system that allows for a wider distribution of scholarly

work. ADT teams endeavour to attract postgraduate research students to deposit their theses to the online database by assisting them in reformatting and bookmarking of their research theses. There are, obviously, many issues involved in this electronic publishing, such as technical, intellectual property, publishing, copyright, etc, which are being presently addressed by the ADT teams. However, it is my strong view that this initiative will revolutionise access to research theses and dissertations, and will have a

tremendous impact on the transfer of information in higher education on a global scale.

I would, therefore, urge our readers to become involved in this important initiative, and encourage their research postgraduate students to consider the deposition of their theses to such online databases.



The modern TGZ building, which houses the UICEE-EHQ office.



Without doubt, the highlight of the 8th Baltic Region Seminar on Engineering Education, which was held in Kaunas, Lithuania, was the signing of the Agreement between the UICEE and Hochschule Wismar – University of Technology, Business and Design (HSW), Wismar, Germany, for the establishment of the European Headquarters of the UICEE (UICEE-EHQ).

Following on from this Agreement, an official launch of the UICEE-EHQ was held at the Technologie- u. Gewerbezentrum e.V. (TGZ) - Technology and Commercial Centre in Wismar on 9 September 2004.

The launch was the culmination of a special Seminar on the achievements of the UICEE and several of its Partners, based in Germany and Poland. This Seminar was organised and carried



out at the TGZ on 9 September 2004, with visits to various HSW research and teaching facilities the following day. The office of the UICEE-EHQ is located in the modern TGZ building, situated directly on the picturesque Wismar Harbour. The photo on the first page shows the TGZ building with an arrow pointing to the UICEE-EHQ office.

This important and historic moment for both the UICEE and the HSW signals the advancement of enhanced activities between the UICEE and Hochschule Wismar, which have continued to bloom under the burgeoning cooperation between the UICEE Director and Prof. Norbert Grünwald, Rector of Hochschule Wismar.

The top photo on this page shows the exchange of Agreements between the representatives of the two Institutions at the Signing Ceremony in Kaunas. Prof. Ramutis P. Bansevicius, Rector of the Kaunas University of Technology (KUT), Kaunas, Lithuania, was the witness to this momentous event.

The bottom photo on this page shows both institutional leaders officially opening the new Centre by cutting a symbolic ribbon.

Wismar's 775th Anniversary

From 19 to 22 August 2004, Wismarians celebrated the 775th anniversary of the foundation of this lovely city on the Baltic coast. The foundation of the city of Wismar was first mentioned in 1229 in some old official documents. A few years later, in order to improve the safety of the trade routes in the area, Wismar joined the Hanseatic League together with neighbouring cities, such as Lübeck and Rostock. This move itself has helped the rapid development of the city, especially its wonderful Gothic architecture. By the end of the 17th Century, Wismar became one of the largest fortresses of Europe, with 18 bastions, nine ravelins and two citadels, which were equipped with 700 cannons.

Between 1632 and 1803, Wismar was occupied by the Swedes, and this has had a considerable impact on the culture, architecture and traditions of the city.



Prof. Z.J. Pudlowski (l) exchanging the Agreement with Prof. N. Grünwald (r), witnessed by Prof. R.P. Bansevicius.

It should be mentioned at this point that in 1908, Robert Schmidt founded an educational institution named *Ingenieurakademie Wismar*. Hochschule Wismar – University of Technology, Business and Design (HSW) follows on this tradition of engineering education in Wismar.

In 2002, the historic centres of Wismar and Stralsund were recognised as global treasures and were placed on the UNESCO World Heritage List.

Sunday, 29 August 2004, saw a colourful procession along the streets of the town led by Dr Rosemarie Wilcken, Mayor (Bürgermeisterin) of the City of Wismar. The HSW, plus other institutions, was very well represented with individual departments wearing their colours and carrying their banners, along with mobile platforms that displayed information posters on their achievements at the HSW.

The top picture on the next page shows Dr R. Wilcken, accompanied by Prof. Norbert Grünwald, Rector of the HSW, and the UICEE Director, who was invited to march as an international guest of the HSW.

8th Baltic Seminar

The 8th Baltic Region Seminar on Engineering Education was held at Kaunas University of Technology (KUT), Kaunas, Lithuania, between 2 and 4 September 2004. About 30 paper presentations were

made at this event. Although small in terms of the number of presented papers, the Seminar was well attended by local academics and attracted participants from eight countries. It also reinforced existing linkages between academics and brought new engineering educators into the fold.

A special symbol of Lithuania's focus on engineering education could be found in the occasional greetings from His Excellency Valdas Adamkus, President of the Republic of Lithuania, which were read out by his envoy.

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



Prof. N. Grünwald (r) and the UICEE Director opening the UICEE-EHQ.

Proceedings are now available for purchase from the UICEE.

The photo at the bottom of this page taken at the Opening Ceremony of the 8th Baltic Region Seminar on Engineering Education shows Prof. Ramutis P. Bansevicius, Rector of the KUT; Dr Rimantas Vaitkus, Vice-Minister, Ministry of Education and Science of the Republic of Lithuania; Prof. Zenon J. Pudlowski, UICEE Director, Seminar General Chairman; and Prof. Romanas V. Krivickas, of the KUT, Local Organising Committee Chairman.

Best Paper Awards

On the occasion of this Seminar, the UICEE also offered to present UICEE Best Paper Awards to the authors of the papers included in the Seminar Pre-Prints that were considered to demonstrate the most significant contribution to the field of engineering and technology education. Registered Seminar participants were asked to select in a popular vote the award-winning papers in five award categories: Diamond, Platinum, Gold, Silver and Bronze, on the basis of the greatest frequency of recognition.

The Awards Committee conferred the UICEE Best Paper Awards on a diverse range of papers. Two equal Diamond (First Place) awards were presented for the papers titled: *Engineering communication* by J. Dulevicius & L. Nagineviciene, both of Kaunas University of Technology, Kaunas, Lithuania, and *Challenges in computer mathematics in engineering education* by D. Schott of Hochschule Wismar - University of Technology, Business and Design, Wismar, Germany. As there were two Diamond awards, no Platinum (Second Place) was accorded. Three equal Gold (Third Place) awards were presented for the papers entitled: *PhysBeans: a toolkit to simplify the construction of applets for physics simulation* by P. Junglas of the Private Fachhochschule für Wirtschaft und Technik Vechta/Diepholz - Private University of Applied Sciences, Vechta/Diepholz, Germany; *Active learning at Kaunas University of Technology* by R.V. Krivickas of



The photo shows Dr Rosemarie Wilcken, pictured with Prof. N. Grünwald (l) and the UICEE Director (r).

Kaunas University of Technology, Kaunas, Lithuania; and *Issues in the accreditation and quality assurance of engineering courses in the Asia-Pacific Region* by A.S. Patil and Z.J. Pudlowski of the UICEE at Monash University, Melbourne, Australia. The Silver (Fourth Place) award went to D.Q. Nguyen and Z.J. Pudlowski of the UICEE at Monash University, Melbourne, Australia, for their paper called: *Globalising environmental engineering education*. Finally, the Bronze (Fifth Place) award was presented for the collaborative paper entitled: *Academic practice abroad: a case study of Hochschule Wismar and the HEPS Tarnów*, co-authored by A. Lisowska-Lis and E.

Wojciechowska of the Higher Education Professional School, Tarnów, Poland, S.A. Mitkowski of the University of Mining and Metallurgy, Kraków, Poland, Z.J. Pudlowski of the UICEE at Monash University, Melbourne, Australia, and N. Grünwald of Hochschule Wismar - University of Technology, Business and Design, Wismar, Germany.

The UICEE members, staff, students and associates congratulate the recipients for their exemplary efforts in attaining these awards.

It should be added at this point that Z.J. Pudlowski, being the UICEE Director, has declined the UICEE Best Paper Awards.

Centre in Częstochowa

On the way from the 8th Baltic Seminar in Kaunas, Lithuania, to Wismar, Germany, several persons stopped over in Częstochowa, Poland, at the Faculty of Management in the Technical University of Częstochowa (TUCz), a Partner institution of the UICEE. The purpose of this visit was the official gala launch of its UICEE satellite centre, called the *Centre for Engineering Management and Agribusiness Education* (CEMAE).

The launch attracted representatives of other Polish academic institutions, members of the UICEE, including the co-chairmen of the UICEE Polish Network (UICEE-PN), Prof. Bolesław Pochopień, the immediate past Rector of Silesian University



Pictured are (l-r) Prof. R.P. Bansevicius, KUT Rector, Dr R. Vaitkus, Lithuanian Vice-Minister for Education, Prof. Z.J. Pudlowski, UICEE Director, and Prof. Romanas V. Krivickas, of the KUT.

of Technology (SUT), Gliwice, Poland, a Partner institution of the UICEE, and Prof. Stanisław A. Mitkowski, Head of the Department of Electrotechnics at the University of Mining and Metallurgy, Kraków, Poland, and Director of the Polytechnical Institute within the Higher Education Professional School, Tarnów, Poland, among various other distinguished guests.

The Centre was opened by Prof. Maria Nowicka-Skowron, a Vice-Rector of the TUCz. It should be noted that Prof. Nowicka-Skowron has been involved with the UICEE, including participation in its conferences, for many years now, and has been instrumental, together with Prof. Janusz Szopa, the present Dean of the Faculty of Management and the former Rector of the TUCz, as well as Prof. Eugeniusz Gurgul, Head of the Department of Agribusiness at the TUCz, in establishing a formal partnership with the UICEE and, indeed, this satellite centre. The top photo this page shows Prof. M. Nowicka-Skowron opening the Centre.

It is envisaged that the CEMAÉ will facilitate research, development and the transfer of information on engineering and technology education and, in particular, promote research and development in the area of engineering management and agribusiness education on a global scale.

Participants and guests were later invited to a gala dinner where several toasts were made to the success of this unique and important operation, especially as it relates to specific engineering specialities, such as engineering management and agribusiness.

Silver Badge Awards

On the occasion of the 8th Baltic Seminar, the Silver Badge of Honour for *...distinguished contributions to engineering education, outstanding achievements in the globalisation of engineering education through the activities of the Centre, and, in particular, for remarkable service to the UICEE* was awarded to Prof. Ramutis P. Bansevicius, Rector of Kaunas University of Technology, Kaunas, Lithuania. This award is a reflection of his impressive achievements in engineering



The picture shows Prof. M. Nowicka-Skowron, Vice-Rector of the TUCz, opening the CEMAÉ.

education, especially in his present role as Rector of a university, which is a Contributing Member of the UICEE. The photo at the bottom of this page shows Prof. R.P. Bansevicius accepting his award.

At the gala dinner, on the occasion of the launch of the UICEE European Headquarters (UICEE-EHQ) in Wismar, two distinguished professors were recognised for their achievements in engineering and technology education, and their special contribution to the success of the UICEE.

Prof. Maria Nowicka-Skowron, a Vice-Rector of the Technical University of Częstochowa (TUCz), Częstochowa, Poland, and

Prof. Winfried Schauer of the Faculty of Electrotechnics and Informatics at Hochschule Wismar, Wismar, Germany, were each awarded a UICEE Silver Badge of Honour.

In reading the citation, when presenting the two awardees with their Badges, the UICEE Director emphasised the specific contribution that the recipients have made by injecting and developing unique engineering education methodologies in their chosen fields of engineering expertise. The photo at the top of the next page shows the proud awardees displaying their awards.

New German Partner

The UICEE is proud to announce that the Technologie-u. Gewerbezentrum e.V. (TGZ) - Technology and Commercial Centre, Schwerin-Wismar, Germany, has joined as a Partner institution of the UICEE. The signing of

the Agreement was conducted at the gala dinner hosted by Mr Norbert Claussen, Lord Mayor of the City of Schwerin, on Wednesday, 8 September 2004, in Schwerin.

The agreement was officially signed on behalf of the TGZ by Mr Rainer Beckmann, a member of the governing body of the TGZ, and Prof. Zenon J. Pudlowski, UICEE Director, with Prof. Norbert Grünwald, Rector of Hochschule Wismar – University of Technology, Business and Design, Wismar, Germany, as the witness (see the bottom photo on the next page).

The TGZ provides space for the premises of the European Headquarters of the UICEE



The picture shows Prof. R.P. Bansevicius, KUT Rector (r), accepting his award from the UICEE Director.

(UICEE-EHQ). The TGZ is in a privileged position in the development of industrial education and training in Germany, and offers substantial expertise in assisting the establishment and management of medium and small-sized enterprises. Hence, it is envisaged that the TGZ will provide input to engineering and technology education, as well as industrial training, to the UICEE global network of engineering educators.

Forthcoming Conferences

Numerous international conferences on engineering and technological education are being planned and organised by the UICEE and members of its network.

Kingston

The 8th Annual Conference of the UNESCO International Centre for Engineering Education, under the theme *Bringing Engineering Educators Together*, will be held in Kingston, Jamaica, between 7 and 11 February 2005. The Conference is being organised and sponsored by the UICEE.

The principal co-sponsor of the Conference, the University of Technology Jamaica, popularly known as UTech, was established in 1958, and is the only one of its type in the Caribbean region. The University's mission is the promotion of learning, and the UTech is committed to the total education of the individual with social and intellectual competences.

The UTech is also home to the *Centre for Engineering Education in Central America and the Caribbean* (CEEAC), a satellite centre of the UICEE.

UICEE members, associates and readers of the UICEE Newsletter are encouraged to attend this international gathering that promises to be an engaging, fruitful and memorable event. Late papers can still be



Prof. M. Nowicka-Skowron (l) and Prof. W. Schauer, the proud awardees of the UICEE Silver Badges of Honour.

accepted, although the number of rooms organised under the special deal with the hotel is strictly limited.

Gdynia

The 9th Baltic Region Seminar on Engineering Education, will be organised by the UICEE and held from 17-20 June 2005 in Gdynia, Poland. It will be a part of the celebrations of the 85th anniversary of maritime education in Poland, and especially at Gdynia Maritime University (GMU), a Partner Institution of the UICEE, which will become 85 years old.

The GMU is a specialised technical university whose mission is to educate and train highly competent and proficient marine officers for the world's merchant fleet and fully qualified shore-based personnel. The studies are conducted at both the undergraduate and postgraduate levels.

Further, Gdynia has been chosen to be the host of the Seminar because of its proven hospitality and an excellent record of involvement in the organisation of many international conference and meetings in collaboration with the UICEE, and because of its accessibility from Central and Eastern Europe, allowing participants from these countries to make a relatively short trip to the Seminar.

Members, especially those in Europe, are encouraged to attend this momentous event, which will also focus on other important areas for engineering and technology education.

Algiers



The photo shows Mr R. Beckmann (r), Prof. Z.J. Pudlowski (l) and Prof. N. Grünwald at the signing of the TGZ Partnership Agreement in Schwerin.

The University of Science and Technology *Houari Boumediene* (USTHB), located in Algiers, Algeria, and a Partner institution of the UICEE, will host and organise the 2nd Mediterranean Seminar on Engineering Education (2MSEE) between 29 and 31 May 2005.

The USTHB, which hosts the *North African Centre for Engineering and Technology Education* (NACETE), a satellite

centre of the UICEE, has been selected as host of this Seminar because of its energetic approach and hospitable record in organising international activities. It is located about 15km from downtown Algiers and only 1km from Algiers International Airport. Algiers itself is positioned as an accessible nexus for Europe, Africa, the Middle East and Western Asia.

Readers should note that the deadline for the receipt of abstracts is 20 November 2004.

Sibiu

Activities are well underway concerning the preparation for the 3rd *Balkan Region Conference on Engineering Education*, to be held in Sibiu, Romania, between 12 and 15 September 2005. The Conference is being hosted and organised by *Lucian Blaga University of Sibiu (LBUS)*, a Partner institution of the UICEE. The objective of this Conference is to activate universities in the Balkan region in engineering education, in order to boost industrial and human resource development.

Romania, in its preparation for joining the European Union (EU), carries out numerous projects in order to expand and modernise its higher education base, and has developed substantial international contacts helpful in this effort. Our colleagues are encouraged to take part in this process and attend the Conference, which will definitely set the stage for future joint activities and projects.

It is hoped that this Conference will also provide the opportunity to establish or strengthen relationships with those involved in the *Balkan Region Centre for Engineering Education (BRCEE)*, a satellite centre of the UICEE, based at the LBUS.

It should be noted that further information on UICEE conferences and associated meeting can be found on the UICEE Web site under *Conferences and Meetings*.

New Postgraduate Student

The UICEE has another postgraduate student on board, Ms Beata M. Bociaga, who began her Master of Engineering Science (Research) studies on 9 August 2004. Her research project is titled *Domestic Waste Problems – Geelong's Approach to the Recycling Process in the Context of Economic and Environmental Sustainability: A Waste Wise Education Strategy*.

This project focuses on worldwide problems regarding

domestic waste and recycling processes, with a case study based on Geelong, a medium-sized regional city in the Australian State of Victoria. It is anticipated that this case study, although conducted in one particular city, should have ramifications for global applications, especially in countries that are beginning to implement programmes on waste management, sustainability and the protection of the environment.

Moreover, it is hoped that this research will have a positive impact on engineering education in general and, in particular, it would formulate a new way of educating the general population on issues of sustainability and more efficient recycling methods.

GJEE Update

Volume 8, Number 2 of the *Global Journal of Engineering Education* has been printed and is currently in circulation. This issue showcases a

dozen award papers from recent UICEE conferences, notably the 7th *UICEE Annual Conference on Engineering Education*, held in Mumbai, India, in February 2004, and the 4th *Global Congress on Engineering Education*, conducted in Bangkok, Thailand, in July 2004. This issue also includes the compelling Occasional Address given by Prof. Michael J. Osborne, Vice-Chancellor and President of LaTrobe University, Melbourne, Australia,

and President of the International Network of Universities (INU), at the 4th Global Congress.

This year's plans also envisage the publication of another German language issue as Vol.8, No.3. This Special Edition, titled *German Network of Engineering Education V*, will be the continuation of a tradition established by the UICEE and Hochschule Wismar – University of Technology, Business and Design, Wismar, Germany.

Prof. Norbert Grünwald, Rector of Hochschule Wismar, also on this occasion, will serve as Guest Editor. It is hoped that this publication will be in circulation early in 2005.

World Transactions

The current issue of the *World Transactions on Engineering and Technology Education (WTE&TE)*, Volume 3, Number 2, featuring 22 highly informative articles on recent advances in research and development in engineering and technology education, is in its final stages of production, and will be printed and distributed to



Pictured are the happy awarders at the Baltic Seminar in Kaunas (l-r): Prof. P. Junglas, Ms E. Wojciechowska, Prof. R. Krivickas, Ms L. Naginevičienė, Prof. N. Grünwald, Ms D.Q. Nguyen, Prof. R.P. Bansevicius, Dr A. Lisowska-Lis, Prof. J. Dulevicius, Prof. Z.J. Pudlowski and Prof. D. Schott.

authors and subscribers in November/December this year.

We are delighted to announce the next Call for Papers for Vol.4, No.1, of the WTE&TE. The deadline for the receipt of original submissions for this issue has been set at 31 March 2005.

UICEE members are encouraged to take up this opportunity and publish their material in the World Transactions. The electronic kit, including author instructions and stylefile, will be sent on request from Mr Marc Riemer of the UICEE on: marc.riemer@eng.monash.edu.au

Polish Visitors

The UICEE is currently hosting two final-year undergraduate students from the Faculty of Materials Engineering and Metallurgy at Silesian University of Technology (SUT), Gliwice, Poland, a Partner institution of the UICEE. Ms Marta Markusik and Mr Przemysław Mateusiak began their occupational traineeships within the UICEE on 6 September 2004, and both have embarked on research concerning environmental engineering and sustainability, and education in this area. In particular, Ms Markusik's project is on the *Management of the Environmental Protection of Post-industrialised Regions*, whereas Mr Mateusiak's project is titled *Research on the Systems of Preparation of Teachers and Trainers for Environmental Protection*.

It is hoped that these research projects will lay the foundations for the preparation of their Masters' dissertations, to be developed on their return to Poland in March 2005.

KIST Initiatives

The *African Centre for Engineering and Technology Education (ACETE)*, based at Kigali Institute of Science and Technology (KIST), in Kigali, Rwanda, a satellite centre of the UICEE, is now two years old. It should be mentioned that the KIST is under the dynamic leadership of its Founding Rector, Prof. Silas Lwakabamba, who is a member of the Executive Board of UNESCO, and also a Deputy Chairman of the UICEE Academic Advisory Committee (AAC).

Without relevant skills, no country can achieve economic development; hence, the ACETE has initiated programmes in ICT and technical teacher training, among others, in order to play a leading role in preparing the country and the region for the technological revolution.

The multitude of training programmes at the KIST under the auspices of the ACETE include a *Short Professional Training Programme* that trains technicians to maintain

computer hardware, network design and administration, as well as software development and management. It also runs a *CISCO Networking Academy* and *Microsoft Certification* programmes. These programmes have attracted not only Rwandan professionals, but also participants from Burundi, the Democratic Republic of Congo, Uganda, Kenya, Tanzania, Nigeria and the Ivory Coast. The photo shows students assembling computers in the Hardware Maintenance Engineering Laboratory at the KIST.

A *Regional ICT Training and Research Programme*, under the umbrella of the Rwanda Development Gateway Foundation, was officially launched by the President of the Republic of Rwanda, His Excellency Paul Kagame, in March 2004. It has started many activities, such as the training of secondary school teachers in intermediate ICT skills. The first group of 50 secondary school teachers, selected from schools that had been equipped with computers and LANS under the World Links project, successfully completed their training programme.



The photo shows students assembling computers in the Hardware Maintenance Engineering Laboratory at the KIST.

The *Electronic Documentation Centre*, which is an online gateway to information on developmental issues, provides free and easy access to a comprehensive set of documents in full text and other information materials on developmental issues in Rwanda. This is now operational and will expand to cover such issues elsewhere.

To advance technology education, the ACETE is embarking on a degree course on *Teachers Training Education and Technical Entrepreneurship* effectively from 2005. The course is multipurpose

to enable the graduates to either be technical teachers in technical secondary schools or technical entrepreneurs, who have excellent skills in their field of specialisation and the appropriate managerial skills to run small and related enterprises. The curriculum will comprise the following: pedagogical skills, practical skills (technical), technology and science, entrepreneurship, applied ICT and practical training in technical secondary schools. The development of the curriculum is funded by the GTZ.

Concurrently, the African Development Bank (ADB) is funding a programme for the upgrading of existing technical secondary school teachers: 75 teachers in total. It is envisaged that with these two programmes in place, technical education in Rwanda will be greatly enhanced.

The *Regional ICT Training and Research Programme*, in collaboration with the Rwanda Information Technology Authority (RITA), initiated a programme to train ICT staff from Government Ministries in ICT technical skills. This project is funded by the SIDA (Sweden), and is run in collaboration with the Institute of Advanced Technology (IAT) in Kenya. The course started in July 2004 and will last for one year.

The Centre also offers *CISCO Router Configuration and Wireless Communication* courses. The Centre is now registered with the International Computer Driving License (ICDL) through its African section based in South Africa, whereby students will be awarded an International Certificate to this effect. These courses benefit participants from the region and elsewhere.

In September 2004, the KIST, in collaboration with the German ICT company, Innovations Champion Network (ICN), and British Telecom, signed a Memorandum of Understanding to provide wireless Internet broadband connectivity to Rwanda, which will also be shared with other countries in the region. This is in an effort to enhance Internet communication within Rwanda and the region at large.

The KIST has been identified to host an ICT training programme with UNESCO support for senior lecturers from various universities in Africa on Web-based content development. The aim is to enhance the capacity of education delivery by African university lecturers. These are two-week intensive courses running continuously.

Visitors to Wismar

A highlight in September was the official launch of the UICEE European Headquarters (UICEE-EHQ) at Hochschule Wismar (HSW), which was well attended by local and international guests, who used this opportunity to speak about actual activities and discuss future projects.

Later, early in autumn 2004, several other international guests visited the Gottlob Frege Centre at Hochschule Wismar, a UICEE satellite centre focused

on engineering science and design. Some of these academics are also regular visitors to the HSW.

In particular, Prof. Tatyana Zverkova of the Odessa National University, Odessa, Ukraine, is working on two projects concerning the improvement of mathematical teaching, namely: ecological models in first year engineering mathematics and advanced ecological models for engineering students. Prof. Valery Konev from Tomsk Polytechnic University, Tomsk, Russia, continues to develop a course for *WebCT* on differential equations. Also, Dr Sergiy Klymchuk of Auckland University of Technology, Auckland, New Zealand, continues his collaborative work with Prof. Norbert Grünwald and Dr Gabriele Sauerbier, on three projects. The projects are: *Using counter-examples in teaching/learning engineering mathematics*; *The transition between school and university mathematics*;

strategies that work; and *Effective teaching of mathematical modelling for engineering students*.

Dr Hamid Gholam Hosseini, also of Auckland University of Technology, is visiting the HSW on sabbatical during the second half of 2004. Dr Hosseini is working with Wismar electronic and control engineering experts, such as Prof. Ingo Müller and Prof. Hans-Peter Dünnow from the Department of Electrical Engineering and Computer Science at the HSW. Dr Hosseini contributes by giving a series of lectures and seminars and prepares professional laboratory manuals, technical reports and lecture notes.

Another group of Polish undergraduate students from Tarnów, Poland, are preparing their diploma theses at the HSW in Wismar. For example, Ms Joanna Piekarcz is designing project materials concerning image reconstruction under the leadership of Prof. Dieter Schott.

Additionally, three more visitors from India have arrived in Wismar to work in the Gottlob Frege Centre.

Congress Proceedings



The photo shows (l-r): Dr S. Klymchuk, Prof. T. Zverkova, Dr H.G. Hosseini and Prof. V. Konev at Hochschule Wismar.

The Proceedings of the recent 4th *Global Congress on Engineering Education*, held in Bangkok, Thailand, last July, comprise papers that present international research and development activities, with three opening addresses, 10 keynote addresses, nine lead papers and almost 50 regular papers, which have been contributed by authors from 25 countries across the globe.

The papers from the Congress present readers with a considerable source of information on a wide spectrum of issues and topics in engineering and technology

education. They showcase findings describing innovation and best practice in engineering education, multimedia and the Internet in engineering education, new trends and approaches to engineering education, effective methods in engineering education, the development of new curricula in engineering education, international case studies in engineering education and training, social and philosophical aspects of engineering, quality issues, accreditation and the international mobility of staff and students.

The elegantly hardbound copies of the Congress Proceedings are available for purchase from the UICEE. Interested parties may find further details on these Proceedings, as well as other worthwhile publications, at the following Internet address:

<http://www.eng.monash.edu.au/uicee/publications/index.html>