



*International Conference on Engineering Education (ICEE)*  
*International Network for Engineering Education and Research*  
*General Secretariat*  
*(iNEER)*

# **iNEER REPORT FOR 2001-2002**

**General Secretariat**

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January 2, 2003

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## **A. Introduction**

The past year was a busy and productive one for iNEER. The Retreat held in Taipei in February helped lay the ground work for a number of new directions. The iNEER Board voted to incorporate iNEER as a non-profit organization. After discussion and review over a 9-month period, the iNEER By-Laws were adopted by the iNEER Board in November 2002. iNEER and ICEE-ISC collaborated with UMIST in the planning and implementation of ICEE-2002.

With personal visits and through e-mails, we expanded our outreach and networking to the worldwide engineering education and research community.

The iNEER/SEU International Engineering Education Partnership Workshop was convened in Nanjing, China, in June.

The first iNEER Special Volume, an archival publication giving a voice to the iNEER community, entitled “Engineering Education and Research – 2001: A Chronicle of Worldwide Innovations”, was published in August. The second volume is scheduled for publication in July, 2003.

We also initiated an iNEER regional workshops series. Each workshop will be interspersed between two successive ICEE. The first such workshop will be held in Sao Paulo, Brazil in March, 2003. It is called: Ibero-American Summit on Engineering Education: A Regional Conference of the iNEER Network.

During the past year, we posted on the iNEER website <http://www.ineer.org> 37 items of interest to international cooperation. To enable easy access, a list of these items together with their hyperlinks, has been compiled and posted at: <http://www.ineer.org/AboutUs/ITEMPOSTEDDURING2002.htm>

The iNEER website has been updated with new contents.

## **B. iNEER/ICEE-ISC Retreat and iNEER Board Meeting, Taipei**

An iNEER/ICEE-ISC Retreat, the third in the series since 2001, was held in Taipei, Taiwan, ROC, during February 19-23, 2002. Ahead of the Retreat, the iNEER Board held a Board meeting on February 20. Minutes of the Board meeting and a summary of the discussion held at the Retreat are posted at: <http://www.ineer.org/Events/WorkshopInfo/MinutesofiNEERBoardMeeting2-19-022.pdf>

An important outcome of the Board meeting was the decision to incorporate iNEER as a non-profit corporation. The first draft of the by-laws was circulated in advance of the meeting and discussed during the meeting.

The Retreat was held under the auspices of Dr. C.H. Wei, Chair of iNEER and ICEE-ISC. Concurrently, Dr. Wei is also Chairman of the National Science Council (NSC) of R.O.C. on Taiwan. In addition to being the primary funding agency for education and research at academic institutions, NSC is also responsible for driving Taiwan's economic development through technology innovations. It also has oversight on two science-based industrial parks with a third one under consideration. Attendees visited the first of these, the Science-Based Industrial Park in Hsinchu, one hour's drive from Taipei. This high tech park has been given much of the credit for Taiwan's economic surge in the 1980's and 1990's.

Chaired by Dr. Wei, the Retreat was an informal event that focused on future plans for global partnerships in higher education, especially engineering education. Of particular interest were emerging trends in regions around the world as represented by the attendees; new potential iNEER partners; new partnership forums; meetings where iNEER representation was needed, influential people we should invite to future iNEER/ICEE meetings, etc.

Attendees were assigned as lead discussers for selected items in the agenda. To facilitate communication, it was suggested that attendees consider framing their remarks in writing in advance of the Retreat.

The list of attendees, Retreat agenda and a photo journal of the event is available at: <http://www.ineer.org/ISCMeet/Welcome.htm#TAIPEIRETREAT>.

### C. iNEER/SEU International Engineering Education Partnership Workshop

The main purpose of this workshop was to initiate interaction between the iNEER community and the engineering education community in China. China has just started to reach out to the international community through its membership in WTO; Chinese engineers are increasingly noted for their contributions to technology innovations; and multinationals are increasingly employing Chinese engineers in their new R&D centers in China. Still, the engineering education community there has not started to develop any meaningful collaborative activities in engineering education with educators in other countries.

The iNEER/SEU workshop represented a major effort launched to develop possible future linkages between iNEER and Chinese universities. The workshop pulled together 19 leading educators from outside of China, and 14 official delegates from leading universities in China. In addition, a number of local participants were also present. Academician Gu Guanqun, President of SEU, and Prof. Wu Jieyi, Senior Vice President

of SEU, attended the workshop. This workshop was held in conjunction with the 100<sup>th</sup> anniversary celebration of the founding of Southeast University in Nanjing, China.

The proceedings of the workshop was jointly edited by Win Aung, Wu Jieyi and F.K. Tsou. This report, which includes a description of the scope of the workshop, the agenda and the list of attendees, is posted at:

<http://www.ineer.org/Events/WorkshopInfo/SEUWorkshopReport5-30-02.pdf>

A photo journal documenting the event is available at:

<http://www.ineer.org/ISCMeet/Welcome.htm#SEUWORKSHOP>

#### D. ICEE-2002

The 9/11 attacks did not seem to have a significant negative impact on abstract submission to ICEE-2002. Per agreement with UMIST, the host for ICEE-2002, iNEER again helped with program development and abstract generation, leading to 15 technical sessions being proposed and accepted by UMIST. These 15 sessions targeted specific emerging areas in engineering education. Volunteers from 10 nations stepped forward to organize these sessions.

The Calls for Papers were forwarded to the iNEER community in December, 2001. By the closing date in February, 2002 a record total of 484 abstracts were received from 47 countries. The 15 targeted Calls received over 200 of the abstracts. Over 90% of all the abstracts came from the iNEER community.

The iNEER Secretariat had direct access to the ICEE-2002 abstract and paper submission database and, with the help of two assistants linked through the iNEER computer network, tracked in real-time, first the rate of abstract submission and later the rate of paper submission. This was done 7 days a week, several times a day for the duration of the abstract and paper submission processes. When the rates slowed, the Secretariat sent out e-mail reminders, prompting the rates to pick up.

The above process seemed to be effective in driving up the participation of the iNEER community, as seen from the results shown below:

# of	Session #	Title/	TOTAL:	484	
<b>Abstracts</b>		Theme	SUBTOTAL Sessions 1-15:	209	43%
			SUBTOTAL Sessions 16-24:	275	57%
<b>11</b>	1	Outreach to Increase Diversity			
<b>7</b>	2	Educational Robotics			
<b>1</b>	3	Educational Challenges in Nanoengineering			
<b>11</b>	4	Short/Modular Courses for Ind. & Prof. Dev.			
<b>21</b>	5	Innov. In Virtual & Remote Lab.			
<b>18</b>	6	Eng. Ed. In Dev. Countries			
<b>4</b>	7	Network-Based Control & Ident. Ed.			

24	8	Innov. Web.Based Teaching
31	9	Uniqve Design Experience
12	10	Supplementary eLearning Materials in Eng. & Com. Sci.
11	11	Tech. & Society: Eng. Ed. In Age of Digital Tech. & Globalization
23	12	Assessment of Stud. Learning
6	13	International Ed. & Accreditation
14	14	Ed. In Com. Disciplines
15	15	Impact of IT on Ed. And Res.
29	16	Facing the Global Challenge
40	17	Changing Structures for Delivery
37	18	Partnership for Progress
2	19	Funding Opportunities
21	20	E-Universities
22	21	Meeting the Needs of Ind.
5	22	SciFi Engineering
28	23	Best Practice
91	24	New Methods & Techniques

<b>ICEE-2002</b>					
<b>TOTAL ABSTRACTS RECEIVED AS OF 4/16/02:</b>					<b>484</b>
1	131	USA	25	3	Slovak Republic
2	53	Taiwan	26	3	Korea
3	43	Brazil	27	2	United Arab Emirates
4	41	UK	28	2	Mexico
5	25	Australia	29	2	Lithuania
6	19	Czech Republic	30	2	Japan
7	14	Norway	31	2	Hungary
8	12	Spain	32	2	Greece
9	11	Ukraine	33	2	Croatia
10	11	Russia	34	2	Colombia
11	10	Poland	35	2	Bulgaria
12	9	Singapore	36	2	Trinidad
13	7	Turkey	37	1	Thailand
14	7	Portugal	38	1	South Africa
15	7	India	39	1	Slovenia
16	7	Germany	40	1	Saudi Arabia
17	6	Zimbabwe	41	1	Rwanda
18	6	France	42	1	Romania
19	6	China	43	1	Pakistan
20	5	Malaysia	44	1	Mauritius

<b>21</b>	5	Canada	<b>45</b>	1	Lebanon
<b>22</b>	4	Switzerland	<b>46</b>	1	Israel
<b>23</b>	4	Sweden	<b>47</b>	1	Iran
<b>24</b>	4	Puerto Rico	<b>48</b>	1	Algeria

E. iNEER Special Volume

We initially planned and proceeded to implement an agreement with the International Journal of Engineering Education to published selected papers from the ICEE every year as a special issue of the IJEE. Our responsibility was to select a subset of the papers, contact the authors to update them, send the papers out for additional peer review and make final selection of about 15 papers for the special issue.

We started work on it immediately after ICEE-2001 and assembled a panel of 5 co-editors. The editors met in October to decide on the initial list of 42 papers which were sent out for review in November, 2001. Based on the reviews the requisite 15 papers were selected in February. At that point, IJEE informed us that, contrary to the signed agreement, the journal would have to charge iNEER \$15 per copy upfront and, further, it would be up to iNEER to market the special issue. In addition, authors would be required to pay an excess-page charge of \$100 per page beyond a certain page limit. In March, the iNEER Board decided to undertake publishing the papers in hardcover book format.

We increased the number of papers to 19 and partnered with Begell House Publishers in the venture, getting the book out just in time for distribution at ICEE-2002 in August, 2002.

The new hard-cover publication, the only one of its kind and the first in a series started by iNEER this year, is aimed at (a) highlighting the benefits of and disseminating the results of international collaboration; (b) serving as a voice for the iNEER community; and (c) furthering the ideals of international partnership in engineering education. The series is intended to complement, not compete with, the existing archival publications in engineering education.

The preface, table of contents, and preface of the book have been posted on the iNEER website and may be accessed through the link:

<http://www.ineer.org/iNEERPapers/Welcome.htm>

F. iNEER Announcements

During the past year, we continued our practice of posting items related to international in engineering education and research, including summaries of funding announcements concerning international cooperation in engineering education and research. Each posted item contains either the complete information of the item or a summary with a hyperlink to the original source. The item could be a major speech or an announcement concerning new funding opportunity. In each case, we sent a short e-mail to members of the iNEER

community who are on iNEERLIST, the e-mail address database of the iNEER communication system. This alerts the members to the presence of, and with a link to, the summaries.

Based on feedback from the community, posting of the summaries is especially helpful for iNEER members from non-English speaking countries, which means about ½ of the current 6,808 member roster. For these people, going through a full blown announcement that sometimes run 30 pages long is not an easy undertaking.

We posted on the iNEER website more than 3 dozen items related to international cooperation in engineering education and research. For easy reference, a listing (a “Contents” list) of these items is posted at:

<http://www.ineer.org/AboutUs/ITEMPOSTEDDURING2002.htm>

#### G. The iNEER Community and iNEERLIST

We believe that our focus on international cooperation, involving all countries on an equal footing, is one of the reasons why the iNEER community is interested in iNEER. Another reason is the free, open structure. Thus the iNEER e-mails and website deal not just with organizing an ICEE, but with many other aspects related to international cooperation in engineering education and research.

As a result, we receive a steady flow of e-mails from persons who have heard of iNEER and who have looked at our website and perhaps have seen our e-mails forwarded to them, requesting us to put them on iNEERLIST, now comprising 6,808 members in about 100 countries. Some existing members also send us lists of individuals interested in being on iNEERLIST. In 2002, the iNEER website received up to 2,499 visits per month.

#### H. iNEER Awards

The iNEER Awards Committee, comprised of V. Schutz and V. Roubicek, received 12 nominations from various countries. These were sent out to 7 judges, each from a different country. Based on comments provided by the judges, the Committee selected 3 awardees. Awards were given out by representatives of the iNEER Board during the ICEE-2002 banquet on August 20, 2002. The awardees were:

Malgorzata Zywno, Professor of Electrical and Computer Engineering, Ryerson, University, Toronto, Canada.

Fu-Kang Tsou, Ph.D., Professor of Mechanical Engineering – Emeritus, Drexel University, Philadelphia, PA, USA.

Laurence Legg, Ph.D., Professor of Product Design and Manufacturing Technology, University of Central Lancashire, Preston, United Kingdom.

## I. Facilitating Partnership MOUs

In 2002, the iNEER Secretariat helped develop formal linkages between universities in the U.S., U.K. and Puerto Rico and Southeast University in Nanjing, China. Draft agreements were first signed during the workshop held in Nanjing in June, 2002, followed by the final agreement being signed during the banquet at ICEE-2002. Photos of the signing ceremonies have been posted on the iNEER website for the respective events.

The universities signing the four agreements developed under the auspices of iNEER and the names of the heads of the respective institutions, or persons representing the heads, that represented the universities at the signing with Southeast University (represented by Gu Guanqun, Academician and President) are:

1. New Jersey Institute of Technology (Robert Altenkirch, President) and Southeast University (Gu Guanqun, President);
2. University of Puerto Rico – Mayaguez (Ramon Vasquez, Dean of Engineering);
3. University of Florida – Gainesville, FL (Winfred Phillips, Vice President for Research); and
4. University of Manchester Institute of Science and Technology, Manchester, England (Peter Hicks, Dean of UMIST).

## J. ICEE -- Past and Future Conferences

With the conclusion of ICEE-2002 in Manchester, England in August 2002, eight ICEEs are behind us. This year, the venues for ICEE-2005 (Gliwice, Poland) and ICEE-2006 (Mayaguez, Puerto Rico) were selected jointly by the iNEER Board and the ICEE-ISC. iNEER inked agreements with the heads of the respective institutions this year.

The upcoming and past iNEER events, including ICEEs, workshops and retreats, are listed at: <http://www.ineer.org/AboutUs/LOCATIONSANDDATESOFICEE12-11-02.pdf>.

## K. Outreach and Networking Visits and Courtesy Calls

We carried out networking visits to and paid courtesy calls on leaders of several institutions during the past year, including (the most recent visit is listed first):

1. Silesian University of Technology, Gliwice, Poland (W. Zielinski, Rector)
2. VSB – Technical University of Ostrava, Ostrava, Czech Republic (V. Roubicek, Rector)
3. Polytechnic Technical University of Valencia, Valencia, Spain (J. Nieto, Rector)
4. Australian Defence Force Academy, Canberra, Australia (S. Lever, Deputy Rector)
5. Australian Research Council, Canberra, Australia (Stephen Walker, Executive Director, Engineering and Environmental Sciences)
6. Australian Council of Engineering Deans, Canberra, Australia



7. University of Sydney, Sydney, Australia (Geoff Barton, Associate Dean of Engineering)
8. University of Western Sydney, Sydney, Australia (V. Ilic, Senior Lecturer)
9. U. of Auckland, Auckland, New Zealand (P. Brothers, Dean of Engineering)
10. University of Manchester Institute of Technology, Manchester, England (J. Garside, Principal and Vice Chancellor)
11. New Jersey Institute of Technology, Newark, New Jersey, USA (Robert Altenkirch, President)
12. Tsinghua University, Beijing, China (Guo Zeng-Yuan, Academician)
13. Natural Science Foundation, Beijing, China (various officials)
14. Southeast University, Nanjing, China (Gu Guanqun, Academician and President)
15. Shanghai Chiao-Tung University, Shanghai, China (Tao Ai-Tzu, Vice President)
16. Tianjin University, Tianjin, China
17. U. of Florida – Gainesville, Florida, USA (D. Colburn, Provost and Senior Vice President)
18. Southern Illinois U., Carbondale, Illinois, USA (W. Wendler, Chancellor)
19. New Jersey Institute of Technology, Newark, New Jersey, USA (S. Fenster, President (April, 2002))
20. U. of Missouri – Rolla, Rolla, Missouri, USA (G. Thomas, Chancellor)
21. Yangon Institute of Technology, Yangon, Myanmar (Hla, Than, Pro-Rector)
22. National Science Council, Taipei, Taiwan, ROC (C.H. Wei, Chairman)

In addition, the Secretary-General attended the annual conference of the Australian Association of Engineering Education (AAEE), where he was a plenary speaker, and addressed the annual meeting of the Australian Council of Engineering Deans (ACED).

He presented seminars at the University of Auckland, University of Missouri – Columbia, and the University of Missouri – Rolla where he spoke at the meeting of the Chancellor's Council.

A short photo journal of some of these visits and seminar presented are posted at: <http://www.ineer.org/ISCMMeet/Welcome.htm#VISITS>

#### L. Vaclav Roubicek Elected Chairman

Following election held by e-mails, Professor Vaclav Roubicek has been elected as the new Chair of the iNEER Board and the ICEE International Steering Committee. His term will begin on January 1, 2003.

A co-founder of iNEER and currently the Rector of VSB – Technical University of Ostrava, Ostrava, Czech Republic, Professor Roubicek is a member of the Senate of the government of Czech Republic. He is the author of a recent book on mining and mineral resources. For a photo of him in action during the recent ICEE-2002, please click on: <http://www.ineer.org/Events/ICEE2002Info/ICEE20020583.jpg>. He is standing on the left.

The results of the recent voting by the iNEER Board and the ICEE-ISC that led to his election as Chair are as follows:

Votes for Professor Vaclav Roubicek:

iNEER Board members: 13 – 0

ICEE-ISC members: 80 – 1 (one write-in vote)

We look forward to working with Professor Roubicek in his tenure as Chair.

We also thank Profesor Che-Ho Wei for his leadership and friendship as Chair during the past 1-1/2 years and look forward to his continued guidance and support.

We also express our appreciation for the work of the Nominations Committee (Vic Ilic and Vic Schutz).

#### M. Operation of iNEER Secretariat and Financial Report

As in previous years, the Secretary General conducts iNEER business from his residence in Potomac, Maryland, USA. He donates to iNEER the time that he spends on performing iNEER work. The total number of hours donated by him for the current reporting period was approximately 900 hours. He continued to be assisted by Annie Aung, a consultant who was hired in accordance with Paragraph K.1 of the By-Laws and served as Administrative Director of iNEER.

The financial report for 2002 is being prepared, pending the report from the Secretariat office at NJIT. The following report is based on unofficial figures. The final figures are not expected to deviate materially from those reported herein.

During the past year, iNEER derived its financial support from annual fees contributed by iNEER Sponsors. UMIST, as host of ICEE-2002, also contributed a portion of the registration fees to iNEER in return for good will and services rendered by iNEER. Another source of income was the sale of the first iNEER Special Volume published in 2002 entitled: “Engineering Education and Research – 2001: A Chronicle of Worldwide Innovations”.

Following incorporation, the iNEER fiscal year has been changed to begin on January 1 instead of October 1. To reflect this change, the financial report for the current transition period is given for the period 10/1/01 – 12/31/02.

During the 15-month period from October 1, 2001 to December 31, 2002, the total income for iNEER was \$117,456.50, including \$99,980 in donations from sponsors; \$17,376.50 in incomes derived from iNEER Special Volume; and \$100 in personal loan. Total expenses for travels, meeting-related expenses, office expenses and expenses related to production and shipping of the special volume, and website maintenance and upgrade, totaled \$73,594.36. Including a carry-over from 9/30/01 of \$18,398.10, the carry-forward to 1/1/03 is \$62,260.24.

Details are given below.

a.	INCOMES (10/1/01 – 12/31/02):	
	Hewlett Packard Company (2002 sponsorship) -	\$ 25,000.00
	Microsoft Corp.(2002 sponsorship) -	\$ 25,000.00
	Hewlett Packard Company (2003 sponsorship) -	\$ 25,000.00
	Payment by UMIST from ICEE-2002 Add-On:	\$ 24,980.00
	Income from iNEER Special Volume:	\$ 17,376.50
	Personal Loan from Win Aung:	\$ 100.00
	Total Incomes:	\$117,456.50 (a)
b.	EXPENSES (15 months, from 10/1/01 to 12/31/02):	
	Office Supplies, Equipment, Software, Misc. Exp.:	\$ 18,391.05
	Meeting-Related Meals, Receptions, Local Transportation:	\$ 5,992.54
	Travel expenses:	\$ 19,511.84
	Other Expenses (technology consultant; accounting; book production and printing; bank fees; etc.):	\$ 29,698.92
	Total Expenses:	\$ 73,594.36 (b)
c.	BALANCE: (a) – (b)	\$ 43,862.14 (c)
d.	CARRY-OVER FROM 9/30/01 (see last year's report):	\$ 18,398.10 (d)
e.	CARRY-FORWARD TO 1/1/03: (c) + (d)	\$ 62,260.24

Respectfully Submitted,

Win Aung, Ph.D., P.E., Dr.h.c.  
Secretary General  
iNEER/ICEE-ISC