September 2012
Newsletter

IACEE

International Association for Continuing Engineering Education

President's Corner: Change is in the Air

Submitted by: Nelson C. Baker - Georgia Institute of Technology

As in the song by Clint Black, fall brings with it a change in the wind. This fall however, the change is more than just the weather; there are sweeping changes that are reshaping continuing engineering education and perhaps even all of higher education. I would like to characterize these changes into a couple of categories:

Pace

As I look at my schedule and reach out to call many of you, the message is much the same: we are out of the office and will be back soon. Our programs are growing, businesses are calling, and we are out putting together continuing engineering education programs for our clients at a pace certainly not seen in some time. From my perspective, this pace has never been seen before. The global aspects of engineering and solutions to global challenges are reaching around the world rapidly.

Political

Around the world there are concerns about the accessibility of higher education and the value that it brings to a graduate. In the economic realities of today, engineering degrees remain valuable, providing graduates access to employment. Maintaining one's engineering expertise, or gaining new knowledge, will continue to be fundamental for a professional engineer to produce the highest quality work possible.

Platforms

Within recent months, several new platforms have emerged allowing large numbers of individuals to learn at one time. These Massively Open Online Courses (MOOCs) have caused many to wonder about the future of higher education. Could they really lower the cost of education? Can they benefit learners, or at least some segment of learners? With the variety of learning styles, MOOCs will likely not be effective for all, but certainly could be for some. It is exciting to see several IACEE members hosting courses in these environments. Reach out to them and ask about how they work. Better yet, take one of their classes!

Have we gotten what we have been asking for? Only time will tell. Look at how the wind is swirling around you and then engage with other members. There is no time more important than now to share how you are being impacted, what you are doing, and learn the same from others. After all, the main purpose for our organization is to network with each other and to learn!

Have a great fall!

Nelson Baker, PhD
President, IACEE
Dean, Professional Education
Georgia Institute of Technology
Atlanta, Georgia USA

What's Inside?

In Memoriam – Professor Yury Alexandrovich Bocharov

Submitted by: Frank Burris – IACEE Headquarters

IACEE member Igor Zhuravlev informed us on 15 August of the sudden passing of Professor Yury Alexandrovich Bocharov on 14 August 2012 at the age of 84. Yury was a founding member of IACEE who was present at the charter signing ceremony in Beijing on 17 May 1989. He represented the Russian Association for Continuing Engineering Education (RACEE) on the IACEE Council from the IACEE's founding until he stepped down from the Council in Singapore in October 2010, 21 years later.

Yury graduated from Bauman Moscow State Technical University (BMSTU) in 1953 with a specialization in "Machines and Processes of Metal Forming (non-cutting)." He completed his post-graduate study at BMSTU 1956-60 and did additional work at the University of California, Berkeley 1960-61.

As an educator, he supervised 42 PhD students and four full Doctors of Science over the course of his career. He took an active interest in CEE within and outside of IACEE and played a very active leadership role in IACEE's East-West Distance Education Project during the '90s.

Within technical circles in the Russian Federation he was well known for contributions to metal-forming technology and processes, and the numerical control systems for them. Yury was honored with numerous state awards during his career, and left a legacy at BMSTU and internationally that will cause him to be greatly missed.

He is survived by his wife Valentina, who may be reached for expressions of sympathy through Yury's email address. She asked us to sincerely thank the many IACEE members who have already expressed their sympathies in the early days following his passing.

Fall 2012 IACEE Executive Committee Meeting

Submitted by: Frank Burris - IACEE Headquarters

IACEE's current Strategic Plan (SP) was finalized in October 2010 at the 12th World Conference on CEE in Singapore. While great progress has been made over the past two years, IACEE leadership has decided to devote two-thirds of our fall Executive Committee meeting to a review and revision of our SP for the new biennium 2012-2014. The Executive Committee will be hosted by Vice President Kim Scalzo at the State University of New York's offices in Syracuse, New York, USA on 17-18 September. The norm in this space has been to recap the news from the most recent Council or Executive Committee meeting but the timing this fall is such that the newsletter will be issued before the Executive Committee meeting is held.

On 17 September we shall spend the entire day in group exercises to conduct the aforesaid SP review, led by the SP Leadership Team of Nelson Baker, Sue Bray, and Kim Scalzo. At the close of this exercise we expect to have a revised SP and a Council organization to carry us successfully through the next two years until the 14th World Conference at Stanford University in March 2014. In addition to this very important strategic planning exercise, a half-day on 18 September will be spent focusing on:

- Planning for the 14th WCCEE at Stanford in March 2014;
- Special Interest Group (SIG) activities and expansion;
- IACEE Quality Program and expansion of participation;
- CEE Manager Training Project;
- Membership development and an important change (see "Did You Know That..." article);
- Awards (existing and new);
- Future WCCEE venues - 2016 and beyond;
- Development of other regional, local, and virtual events between World Conferences;
- Website Development

Minutes from this Executive Committee meeting will be issued in draft form approximately one week after the meeting and approved approximately one month after the meeting. Upon final approval they will be posted, as are all Council and Executive Committee meeting minutes, on the IACEE website www.iacee.org under the "Officers" tab, (clicking on "Minutes of Meetings").

Your thoughts on these agenda items and all other business of IACEE, as always, are welcome at info@iacee.org.

The Development of Engineering Education in China

Submitted by: China Association for Continuing Engineering Education (CACEE) and Zhang Guoqing

The Chinese engineering education system consists of college engineering education and continuing engineering education, which are combined together and developed harmoniously.

1. College Engineering Education

1.1. Training Scale: In the past 60 years, 10.8 million university and college students, as well as 580,000 postgraduate students, graduated from college engineering education in China. By the end of 2010, there were 1,003 universities offering engineering

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courses, accounting for 90% of the universities, with 3.1 million undergraduate students and 470,000 postgraduate students.

1.2. Existing Problems: Talent training modes lack diversification, as well as the convergence, of engineering education modes, which leads to a shortage of top talent and practical technicians at the same time. Also, the system is weak in practical teaching: there is a severe scarcity of engineering, and poor university-industry-research collaboration. Third, the evaluation system focuses on paper study instead of design and practice. Fourth, we do not think highly of the academic innovation in education and entrepreneurial training and this investment is also inadequate.

1.3. Plan for Educating and Training of Outstanding Engineers: In order to solve the existing problems, China launched a plan for educating and training outstanding engineers in June 2010. The implementation of this plan includes five aspects. First, set up a new mechanism of talent training by uniting universities and enterprises in partnerships. Thereupon enterprises change from a simple employing unit to a joint training unit. The training goal, training program, and training process will be developed and carried out by both sides. Second, reform the training talent mode by emphasizing the capacity of engineering and innovation. Establish a number of national Education Centers of Engineering Practicing in enterprises. Students will spend a year studying in enterprises and do graduation design based on practice. Third, improve the system of employment and evaluation of engineering teachers. The employment and evaluation of teachers will focus on project design, patent, university-industry collaboration, and technical service. Teachers who have worked in enterprises will receive preference in employment over those who did not; several years of work experience in the enterprises will be required for teachers' promotions. Fourth, expand further the opening-up of engineering education. The CSC (China Scholarship Council) gives priority to the support of teachers and students to carry out international exchange and overseas enterprise practice as well. Fifth, formulate a talent training standard by educational and industrial circles. The Ministry of Education will formulate the general standard with the Chinese Academy of Engineering and will formulate professional standards with the industry sectors; hence, universities will cultivate talent on the basis of the standard. International standards will be applied to evaluate the talent training quality of the plan for educating and training of outstanding engineers.

2. Continuing Engineering Education

2.1. Overview: The modern concepts of continuing engineering education (CEE) were first introduced to China in 1979. Step by step, CEE has developed greatly over the past 33 years. At present, professional and technical personnel number 55.5 million. By the end of 2010, the total number of engineering technicians in the public-owned economy reached 5.415 million, accounting for 16.8% of professional and technical personnel in the public-owned economy. According to incomplete statistics, nearly 60,000 education and training institutions have engaged in continuing education nationwide in China. In 2010, 37.62 million professional and technical personnel, including engineering technicians, attended training and nearly 2.07 million people took degree education while working. This has provided indispensable talent to support the national economic and social development, and has also provided an effective way for the development of one's personal career.

2.2. 653 Project: Led and driven by the government, a large-scale continuing education activity for professional and technical personnel was carried out in 2005 to improve capacity and renew knowledge in several important professional and technical areas. This activity was listed under national economic and social development of the 11th five-year plan as an important talent training project. During the six years from 2005 to 2010 in five areas, namely modern agriculture, modern manufacturing, information technology, energy technology, and modern management, 3 million high-middle-level professional and technical personnel were trained. Therefore the name given was abbreviated as the 653 Project. By the end of 2009, the data showed that in the 653 Project, 33,406 training programs were implemented; 3,904,212 million people finished professional course training; and 3,756,875 million people attended public course training, such as "intellectual property," "innovation capacity," etc. In fact, the total number of the personnel (7,661,087 million) exceeded the original goal.

2.3. Renewing Knowledge Project for Professional and Technical Personnel: From 2010 to 2020, a large scale continuing education project will be carried out in a number of key areas, namely: equipment manufacturing, information, biotechnology, new materials, marine, financial accounting, ecological environmental protection, energy and resources, disaster prevention and mitigation, modern transportation, agricultural science and technology, and social work. In addition, nine areas of modern service industries will be addressed, centered on China's economic structure adjustment, the development of high and new technology industries, and the improvement of capacity in independent innovation. Each year, 1 million top professional and technical personnel will be trained. By the end of 2020, the total number will be 10 million. In addition, a number of national continuing education bases relying on higher education, research institutions, and teaching organizations in big companies would be established. Four key programs are planned:

1. Advanced training program: About 200 advanced training classes will be conducted every year to train approximately 10,000 high-level professional and technical personnel, characterized by high quality, small scale, and distinct characteristics.

2. Training program of professionals in short supply: The main content of this program consists of renewing knowledge, mastering advanced technology and enhancing professional skills. This program would train 800,000 talents every year.

3. Job training program: It aims at the career development and job demand of talents in relevant key areas. This training would be carried out in various ways with annual talent training of around 190,000.

4. Construction project of continuing education bases for state professional and technical personnel: Before 2020, about 200 national continuing education bases will be built. Meanwhile, the development of training programs, the construction of teachers, teaching material, curriculum systems, and online learning platforms, etc., will be promoted as major methods of continuing education for professionals. As for the source of funding, the government, society, employing unit, and individual should invest jointly to safeguard the source of funding. The central government will invest directly in nearly 1.2 billion Yuan in 10 years; the programs undertaken by local governments at all levels will be guaranteed by corresponding local departments of finance; the employ-

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ing unit will extract training fees according to rules (1.5% to 2.5% per capita of total wages). The content of the service includes public notification of the program directory, establishment of a service network for the whole society, building course and teaching materials systems, and developing state continuing education database, etc.

For further information, please contact cacee@cacee.org.cn.

Pioneering Innovation Ecosystems – EU & Aalto

Submitted by: Markku Markkula – Aalto University


Markku Markkula

During the IACEE World Conference in Valencia in May, many of my old CEE peers asked not just, "What have you Markku been doing lately?" but also, "What have you learned in your new assignments?" My answer to the first part was simple, I have been an initiator of some totally new developments within the Aalto University transformation – Aalto being the forerunner of European university reform. My focus has been on social impact and on EU strategic issues. I answer the second question here in more detail, linked to my EU role as a Member of the EU Committee of the Regions, which takes me to Brussels some 20 times each year.

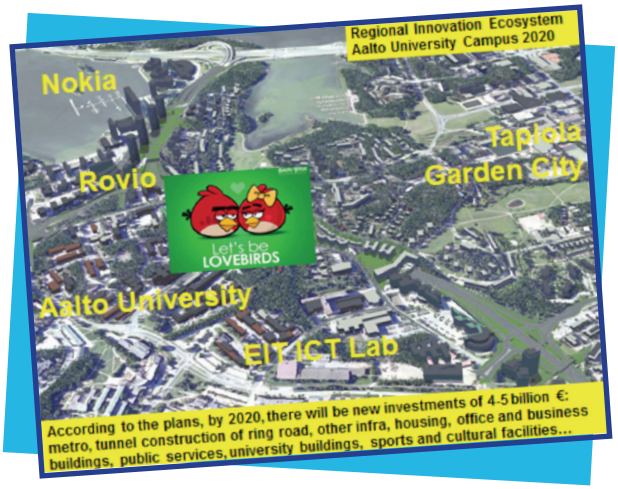
In CEE we have always looked for the large majority of engineers who need to update and upgrade their skills and competencies. In addition, and nowadays more and more, we have produced CEE programs and other forms for learning for societal and industrial change agents. The growing interest should now focus on open innovation and regional innovation ecosystems, since they are the knowledge society's approach to productivity, well-being, and sustainable development, both societally and economically.

We need to apply the new dynamic understanding of regional innovation ecosystems in which companies, cities and universities, as well as other public and private sector actors (this being the "Triple Helix" cooperation concept), learn to work together in new and creative ways to fully harness their innovative potential. The challenge, which we take very seriously in Europe, is to modernize the Triple Helix theories and practices. Many of the interesting developments are described in the Open Innovation Yearbook 2012 published by the European Commission. See that and many activities related to the work of the EU Open Innovation Service Policy Group at www.openinnovation-platform.eu.

Why is this innovation ecosystem approach so important? Digitalization and globalization are the drivers of this phenomenon, which has changed global business logics thoroughly. Companies and other organizations create value through networks in which they cooperate and compete simultaneously. I challenge the CEE community to review the Yearbook by quoting two of its articles.

Professor Henry Chesbrough: "A services perspective also changes the competitive landscape. Customers can become partners, as can suppliers. Competitors become collaborators. Strangers become important, even vital, to competitive success. Integrating these disparate inputs into new, coherent systems and architectures becomes a key source of value in a world dominated by services ... The lack of a tangible product means that each party in a transaction needs the other's knowledge in negotiating the exchange ... As technical complexity rises, the services cus-tomer becomes a co-producer of a service innovation, intimately involved in defining, shaping and integrating the service into his organization ... Given the potential value in identifying, assembling, connecting, integrating and testing complex services, the evolution towards services is ushering in a new kind of value-added activity: systems integration.

In another article we (Markku Markkula and Hank Kune) integrate this to the newly started Finnish four year, €20 million "Energizing Urban Ecosystems" (EUE) research project: "The establishment of Aalto University through the merger of three top-level traditional universities has opened new global avenues for the Finnish knowledge-driven pioneering activities. Helsinki Metropolitan Region and, at its core, the Innovation Triangle Area T3, is pioneering European digital and innovation development ... EUE's approach promotes a number of interdisciplinary themes: mixed-use urban systems and communities; urban infrastructure asset management and value development; sustainable lifestyles, work-life balance and people flows; and smart, emission-free regional energy and communication systems ... Its core activities will prototype, demonstrate, and implement new urban design strategies and business-driven innovative solutions, as well as service concepts of the future, taking advantage of cutting-edge knowledge and technologies such as digitalization, regional information modeling, and visualized virtual reality."



EU has set the target for Europe to become a global leader in tackling the grand societal challenges. To achieve this target we are now renewing our EU research policy with the new label "Horizon 2020." The laboratories for innovation are no longer traditional university facilities, but regional innovation ecosystems operating as test-beds for rapid prototyping of many types of user-driven innovations: new products, services, processes, structures, and systems, which need to be of a transformative and scalable nature. This is influencing, or at least should influence, thoroughly on CEE, especially increasing its research and innovation dimensions.

IACEE Financial Report for 2012 Year-to-Date

Submitted by: Frank Burris - IACEE Headquarters


Frank Burris

IACEE's income, expense and net year-to-date after the first eight months in our 2012 fiscal year (as of 31 August 2012) are portrayed below.

Balance Forward on 1 January 2012	$28,835.25
Dues Income	$10,074.16
13th World Conference on CEE Proceeds	$11,130.59
IACEE Quality Program Fees	$5,450.00
Interest from Savings	$50.36
TOTAL INCOME	**$55,540.36**
Vieth Consulting Website Modifications	($645.00)
Vieth Consulting Monthly Fees (website, MMS, etc.)	($400.00)
Wells Fargo Bank & PayPal Fees	($746.90)
Staff Travel	($2,263.24)
Professional Association Memberships (IFEES)	($500.00)
31 January Executive Committee Meeting	(509.88)
Supplies	(10.00)
TOTAL EXPENSE	**($5,075.02)**
NET	***$50,465.34***

Largely due to a successful World Conference 2012 in Valencia and very low expenses due to major volunteer contributions, IACEE's NET has surpassed the $50,000 level for the first time in many, many years.

Please contact Frank Burris at f.burris@iacee.org for any further financial details.

Enjoying Summer Vacation Activities with IACEE Members: Another Membership Benefit

Submitted by: Sue and Frank Burris – IACEE Headquarters

Last winter when my wife, Sue, and I were initially planning a summer vacation activity, we first considered a western Mediterranean cruise after the 13th World Conference in Valencia, Spain. After many weeks of consideration, Sue expressed a strong preference for a Baltic Sea cruise in late June/early July. The thought of experiencing cool weather in summer and those long summer daylight hours of the Baltic region convinced Sue and of course I always agree with her! We finally settled on a 12-day cruise originating and terminating in Copenhagen, with visits to seven other ports: Oslo, Aarhus, Warnemunde (train to/from Berlin), Tallinn, St. Petersburg, Helsinki, and Stockholm.

Your intrepid reporter was immediately struck by the potential to visit IACEE (and other) old friends at six of the eight ports. The thought of getting "inside information" about each of these stops and renewing some old and relatively new acquaintances drove me to send our cruise schedule to 15 friends (we hope they still are friends!) in the Baltic region, suggesting a brief rendezvous in Copenhagen, Aarhus, Berlin, Tallinn, St. Petersburg, and Helsinki. Sorry, Oslo and Stockholm—you were both beautiful but we had no special local contacts with you.


Lars Frølund,
barbecue chef for 40 guests!

We began our adventure with three days in Copenhagen before departing on 25 June. Early on I learned to my delight that Aarhus University's Lars Frølund had recently relocated to Copenhagen to oversee the university's entrepreneurship activities in the Danish capital. Lars and his wife Karine were hosting a Midsummer's Night party on 23 June for about 40 guests and we were graciously invited to join that happy event. Lars, pictured below in a poncho that helped him dodge the occasional raindrops, presided over the Midsummer's barbecue. After dinner, the entire party adjourned to the nearby canal shore for the traditional bonfire and the burning of the witch!


Bonfire and witch burning in Copenhagen canal.

Sue and I treasured our time in Denmark to experience this bit of northern European culture, noting that the most significant marking of the summer solstice in Southern California is likely a meteorologist's comment during the evening weather report!

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We set sail for Oslo on 25 June and enjoyed the scenic approach to the city through a long fjord on 26 June. That evening we left for Aarhus, Denmark, where we rendezvoused with Dr. Flemming Fink, past IACEE President and Director of Aarhus University's Entrepreneurship Centre. We met with Flemming and reminisced over an outdoor Danish lunch at Den Gamle By, a reconstructed "old town" that is now a park in Aarhus.

Flemming Fink and Frank Burris after enjoying lunch outdoors in Aarhus

Flemming demonstrated his clout with the Danish Royal Family by arranging for the royal yacht to dock at the same pier where our cruise ship had docked. We waited in vain for a royal welcome from Queen Margrethe II!

In our next port of call, Warnemunde, Germany, we took a three-hour chartered train ride to Berlin. After a bus tour of many Berlin tourist sites, we met with one of Sue's Ohio high school classmates and his German wife who treated us to a delightful local lunch (mit bier!) on the Kurfurstendamm. Alas, I was not successful in selling them an IACEE membership but we very much appreciated their hospitality.

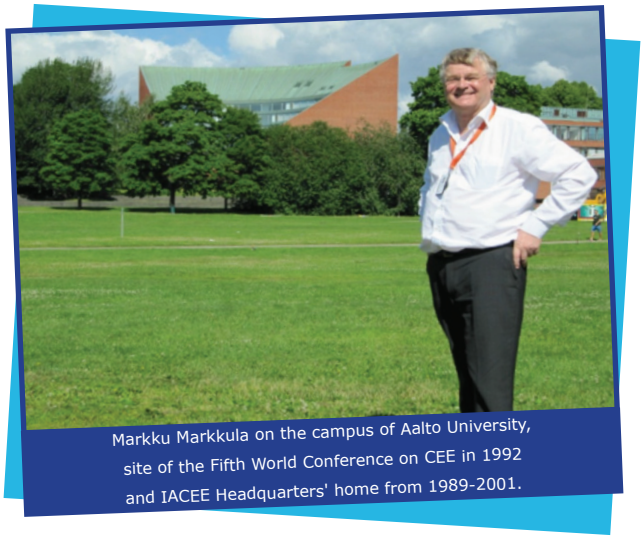

Ragne Kalamees (right) and sister, Eveli, in Tallinn.

We set sail the evening of the 28th for Tallinn, Estonia, looking forward to a full day on board ship to rest and tend to some much-needed laundry. Arriving in Tallinn on a Saturday morning (30 June), we were met by relatively new IACEE member Ragne Kalamees of Tallinn University of Technology and her sister Eveli. Having asked only for a breakfast chat about the local surroundings, our two hosts gave us a five-hour personalized tour of Tallinn, a beautiful and historic city on the shores of the Baltic. The old town in Tallinn is certainly picturesque and very much worth a visit. We also visited the remains of a 14th century convent.


Sue and Frank in remains of a 14th century convent

We sailed from Tallinn to spend the next two days in St. Petersburg, a city that I had last visited in November 1991 as a member of an ASEE delegation to former Soviet engineering schools. It was an incredible experience to contrast my 21-year-old images of 1991 Leningrad with the St. Petersburg of today. Unfortunately, our attempts to rendezvous with three IACEE members failed when we had to cancel one of our shore excursions and found ourselves unable to leave the ship on the second day in St. Petersburg. The best I could do was to hold a $50 phone conversation with IACEE member Professor Viacheslav Kulagin of St. Petersburg State University ITMO and, in turn, learn a serious lesson about cell phone usage from on-board the ship.

We departed beautiful St. Petersburg and headed for Helsinki, where I have many fond memories from the early days of IACEE in the '90s. Katriina Schrey-Niemenmaa, IACEE Council member from the Helsinki Metropolia University of Applied Sciences, met our ship the morning of 3 July and provided a terrific tour of Helsinki before turning us over to Markku Markkula at his Aalto University office. Sue and I chatted with Markku, IACEE's Secretary General for its first 12 years and 2012 Biedenbach Award winner, before he returned us to the heart of the city at mid-day for a Finnish lunch and a visit to the Helsinki Market.


Markku Markkula on the campus of Aalto University, site of the Fifth World Conference on CEE in 1992 and IACEE Headquarters' home from 1989-2001.

Our final port of call was Stockholm, where we found a beautiful city and archipelago, but did not find any IACEE members. Take heed, Swedes! Then we spent another day at sea on before arriving back in Copenhagen early on 6 July. On 7 July, Lars Frølund picked us up at our hotel and took us to Kronborg Castle in Helsingor, about 40 kilometers north of Copenhagen, to experience the Danish countryside and visit a place steeped in history located on the Øresund Sound between Denmark and Sweden. Kronborg is known worldwide as the home of Shakespeare's Hamlet and Holger the Dane also resides there.

On 8 July, Sue and I began our long journey home to California after a terrific Baltic adventure that was enriched incredibly by our opportunities to interact with many IACEE friends. We appreciate all the time our colleagues spent with us. When you travel in the future, check out opportunities to visit IACEE colleagues in the areas you visit; you'll be pleased at their excellence as local information resources!

Welcome to New IACEE Members & Membership Report

Submitted by: Frank Burris – IACEE Headquarters

IACEE is very pleased to welcome 44 new individual members who have joined the Association as a consequence of their participation in the 13th World Conference on Continuing Engineering Education in Valencia, Spain in May 2012. A portion of their non-member fees for the WCCEE has been applied to a one-year Individual Membership in IACEE.

Member Type 5: Individual Members

BAO Huaying
Beijing Normal University, China

CHANG Yongji
Harbin Institute of Technology, China

CHUANG Shaoming
Changchung Institute of Technology, China

Vaida DOBILAITE
Kaunas University of Technology, Lithuania

Juan Alejandro FLORES Castro
Universidad del Pacifico, Peru

Marc GOOSSENS
European Society for Engineers & Industrialists, Belgium

Juan Bautista GRAU Oliver
Universidad Politecnica de Madrid, Spain

GUO Chengjun
Changchun Institute of Technology, China

Tomas de Jesus GUZMAN
Instituto Technologico de Costa Rica, Costa Rica

Timo HALLENBERG
HAMK University of Applied Sciences, Finland

HAN Dongjiang
Harbin Institute of Technology, China

HUANG Pei
The Open University of China, China

HUANG Wenfeng
Beijing Normal University, China

Martina KLIEROVA
Slovak University of Technology, Slovakia

Vladimir KOROLEV
St. Petersburg State University ITMO, Russia

Erno KOVACS
University of Miskolc, Hungary

MA Xin
Harbin Institute of Technology, China

Marita MAKINEN
HAMK University of Applied Sciences, Finland

Shinya NISHIMURA
Niigata University, Japan

NIU Ben
The Open University of China, China

Paul NOWAK
Warsaw University of Technology, Poland

Ricardo PAREDES Solorio
Universidad Autonoma de Puebla, Mexico

Jose Manuel PASTOR Benlloch
Florida Universitaria, Spain

Alfredo PEREZ Paredes
Universidad Autonoma de Puebla, Mexico

Simon PITTS
Northeastern University, USA

QIAN Ziqiang
East China University of Science & Technology, China

Laszlo RADACS
University of Miskolc, Hungary

Takashi SATO
Niigata University, Japan

Christian-Andreas SCHUMANN
West Saxon University of Zwickau, Germany

Peter SERDYUKOV
National University, USA

Sihana SIHANA
Gadjah Mada University, Indonesia

Seema SINGH
Delhi Technological University, India

Elisabeth SJOER
Delft University of Technology, Netherlands

Domenico SORRENTI
Universita C. Cattaneo LIUC, Italy

Eugenija STRAZDIENE
Kaunas University of Technology, Lithuania

Milan STUR
Slovak University of Technology, Bratislava, Slovakia

SUN Liping
Donghua University, China

Laszlo SZENTIRMAI
University of Miskolc, Hungary

WANG Li
The Open University of China, China

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WANG Qing
Beijing Institute of Technology, China

YIN Zhiying
The Open University of China, China

YUAN Ling
The Open University of China, China

ZHANG Hui
The Open University of China, China

ZHU Xuewen
Donghua University, China

Current total IACEE membership stands at 209 members, split among the five membership types as shown below:

Type 1: Regional Leader Organizations	3
Type 2: Professional Organizations & Societies	6
Type 3: Industrial Organizations & Companies	4
Type 4: Academic Institutions and Other Coordinators & Providers of CEE	49
Type 5: Individual Members	147
TOTAL	209

There are now 40 different countries represented in IACEE's membership, as indicated in the following table:

USA	64
China	46
Finland	14
Singapore	6
Canada, Japan, Russia	5
Brazil, Hungary, Netherlands, Mexico, Spain	4
Belgium, India, Philippines, Slovakia	3
Austria, Denmark, Estonia, Germany, Indonesia, Lithuania, Portugal, Saudi Arabia	2
Argentina, Australia, Colombia, Costa Rica, Guatemala, Israel, Italy, Kenya, Norway, Peru, Poland, Romania, Sweden, Switzerland, Turkey, United Kingdom	1

From the above, one can see that opportunities are great for membership growth in many parts of the world. Let's all commit to the recruitment of at least two new members during the coming year!

University of Wisconsin–Madison's Tom Smith Helping Develop New ISO Standard for Asset Management

Submitted by: Sami Benz – University of Wisconsin–Madison Engineering Professional Development

The International Organization for Standardization is planning on releasing a new standard for Asset Management in 2014. The University of Wisconsin's Thomas W. Smith is on the international committee developing this standard.

An IACEE member and program director with UW–Madison's Department of Engineering Professional Development, Smith is a U.S. representative on a 37-member ISO committee prepping ISO 55000, the new standard for Asset Management.

"ISO 55000 has been conceived as a very broad standard, which can affect the management of physical assets in all types of organizations, both public and private," said Smith, who is also one of the draft's editors.

The technical committee on asset management is made up of representatives from 37 different countries and a number of different business areas. These range from commercial real estate, mining, and manufacturing, to utility systems, large-scale property management, and physical infrastructure.

"This is a tremendously talented group of people and throughout this process I have learned an enormous amount from them," says Smith.

The origins of the original International Standard for Asset Management can be traced back to the 1970s-1990s, says Smith, a period rife with deteriorating infrastructures. "The ISO Standard 55000 tried to figure out where people should invest their money. Would it be best to repair, refurbish, or replace?"

The new version of ISO Standard 55000 goes further, expanding upon the old and covers more ground by concentrating on strategy says Smith. By using this more thorough and systematic approach, focus is expanded and the standard becomes relevant and appealing to new sectors. "New services and players are a good thing," says Smith. "They equal more expertise and competition, as well as higher quality."

The new ISO 55000 specifically requires a life-cycle view of physical assets, and places asset management in an organizational strategic context.

ISO/PC 251 Asset Management, 3rd Meeting, SABS, Pretoria, South Africa, February 2012

Taking a management systems approach, ISO 55000 was written to be compatible with other management systems. These include ISO 5000 for energy management, ISO 14000 for environmental management, and others for safety, security, and quality.

Currently in draft form, this updated Asset Management Standard will be circulated among the 162 ISO-member countries for comment in Sep-

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tember 2012. It will officially be released in early 2014, a product of four years of hard work by the committee.

The University of Wisconsin–Madison's Department of Engineering Professional Development frequently offers courses that address best practices in asset management. Course listings are available at epd.engr.wisc.edu.

For more information on articles appearing in this newsletter, or to submit suggestions for future articles, please contact: Phil O'Leary, Department Chair, University of Wisconsin-Madison, Department of Engineering Professional Development, or Secretary General, Frank Burris.

Did You Know That...

Submitted by: Frank Burris – IACEE Headquarters

• FEANI (European Federation of Engineering National Organizations – www.feani.org) is adding Continuing Professional Development (CPD) records to the FEANI Cards of its members. The FEANI Card was created because mobility across national borders is important in Europe. Engineers and employers require a tool that shows comparable educational profiles whose recognition is based on international standards and is easy to use. Alfredo Soeiro reported this item and would be pleased to respond to questions at soeiro.alfredo@gmail.com.

• IACEE is in the process of modifying its Membership Management System (MMS) to permit every institutional member ($250 annual dues and member types 1, 2, 3, and 4) to list as many as five members in an institutional membership record. One of the outcomes of this action is that every member listed in an institutional membership record will receive all membership mailings, including newsletters. The necessary programming to effect this change in MMS was completed in early September. On 11 September an announcement was sent to all IACEE members requesting that all institutional members send up to four additional names and their contact information to Frank Burris at f.burris@iacee.org. If you have not already done so, institutional members should begin thinking about one to four additional worthy names to designate for the new membership records!

• A list of past presidents of IACEE has been added to the website www.iacee.org. Please go to the "Officers" tab on the homepage and click on "Past Presidents."

• Lists of the recipients of IACEE's two major awards have been added to the website www.iacee.org. Please go to the "Conferences" tab on the homepage and click on "IACEE Awards" to see past recipients of both the *Joseph M. Biedenbach Distinguished Lectureship Award* and the *Glen L. Martin Award for Corporate Leadership in Continuing Engineering Education*.

• Wim Van Petegem, VP Organizational Sustainability for IACEE and SEFI President, has a new function at his university. As of 1 September 2012, he has become 'Director of the Teaching and Learning Department' at KU Leuven. This new department unites all education support centers at the university into one directorate. Together with the Vice-Rector Education and a team of 120 colleagues, he is now responsible for developing and implementing a vision and strategy on good quality academic education (including lifelong learning), for supporting teachers and learners in their teaching and learning activities, and for streamlining the whole educational organization and all its processes. More may be found at www.doel.kuleuven.be.

IACEE Quality Program Update

Submitted by: Nelson Baker – Georgia Institute of Technology, Ed Borbely – University of Michigan, and Kim Scalzo – State University of New York

Previous IACEE newsletters have frequently reported on the development of the IACEE Quality Program and its several predecessors: the DAETE Project, DAETE2, etc. For the June 2012 Annual Conference of the American Society for Engineering Education (ASEE) in San Antonio, Texas, USA, three IACEE Council members authored a paper on the IACEE Quality Program Those authors were IACEE President Nelson Baker, IACEE Vice President, Products and Services Kim Scalzo, and IACEE Council member Ed Borbely. The paper title was *Quality Standards for Continuing Professional Development Organizations and Quality Management through Self-Assessment and Benchmarking*. It has been published in the proceedings of the 2012 ASEE Annual Conference.

While its length (six pages) is too great to include here in its entirety, we urge you to use the following link to access the paper for a good update on the IACEE Quality Program: http://tinyurl.com/9ky663c. For further information on the Quality Program, please contact Kim Scalzo at kim.scalzo@suny.edu.

Upcoming CEE Events

World Engineering Education Forum (WEEF)
15-18 October 2012; Buenos Aires, Argentina

Border-Crossing as a Viable Choice: Collaboration, Dialogue and Access to HE (EUCEN)
7-9 November 2012; Valetta, Malta

CIEE Global Perspectives: Developing strategic initiatives, educating for a world economy
14-17 November 2012; Shanghai, China

ASEE 2013 Conference for Industry and Education Collaboration (CIEC)
6-8 February 2013; Mesa, Arizona, USA

IACEE Special Interest Group (SIG) on Community-Based Innovation

Submitted by: Lars Frølund – Aarhus University, Denmark and Soma Chakrabarti – University of Kansas, USA


Lars Frølund

Community-Based Innovation (CBI) is about developing new products or services through close collaboration with the end users (learners, participants, customers, and clients) - a process that is now often referred to as "co-creation" or "co-innovation." When the communities for which products or services are being developed are involved in the co-creation process, a completely new product or service may be innovated, or an existing product or service may take a new shape. In a summary report (http://personal.lse.ac.uk/samsona/cocreation_report.pdf) of research on co-creation, "Co-creation: New Pathways to Value, An Overview," by London School of Economics Enterprise, limited for a private organization, many forms of co-creation or community-based innovation are explored. However, from the perspective of Continuing Engineering Education (CEE), we believe that this Special Interest Group can:


Soma Chakrabarti

- Co-create new products/services for competency development
- Be a springboard for ideas in CEE business development
- Be a lab for development and test of a CBI model in CEE
- Share information on how to engage online community members in co-creation, and
- Help other IACEE Special Interest Groups develop models for co-creation

During the last IACEE World Conference, we prepared a presentation on CBI in CEE, and we have now uploaded it to the IACEE website's file archive section: http://www.iacee.org/docs/SIG_CBI_General_Meeting_Presentation.pptx. This presentation also shows how LEGO, as one of the first few companies to tap on the "co-creation" model, designed products "with" their customers. In CEE, a university may directly work with an organization to co-develop products or services where the learners or students can be involved, or a faculty may work with adult learners in an online community to build a course. We envision that this SIG will be a testing ground for many such ideas.

If you have not yet joined the SIG on CBI and would like to do so, please e-mail Lars Frølund at frolund@adm.au.dk or Soma Chakrabarti at schakrab@ku.edu.

Additionally, please feel free to join us in the IACEE group on Facebook for a conversation on CBI in CEE.

IACEE Calendar Items

Mid-Winter Executive Committe Meeting
(in conjuction with ASEE CIEC)
8-9 February 2013; Mesa, Arizona, USA

Mode of University-Enterprise Cooperation Applied in OJT

Submitted by: Feng Aihua – Baosteel Talent Development Institute and Member, IACEE SIG on University/Industry Collaboration


Feng Aihua

In view of the company's demands on employees' training and the university's advantages on education resources, Baosteel has long looked at universities as important partners to develop its training. Until now Baosteel has maintained training cooperation with over 20 universities at home and abroad, and entered into three to five years of strategic cooperation agreements with some to enrich the cooperation and constantly improve it.

Due to Baosteel's import of globally advanced technology and equipment, new employees always realize that what they learned in college is too limited or even outdated to match their work requirements, which triggers their desire to enhance their expertise by means of on-job-training (OJT).

In Baosteel's view, against a backdrop of fierce global competition, it shall engage in development of multiple talents. For example, the high potential employees with technology backgrounds are oriented to learn marketing, trading, financial management, and commercial expertise. The onsite operation workers are encouraged to master multi-skills to solve complex problems. Thus, Baosteel has its long-term training plan covering employees in different posts with comprehensive expertise enhancement. We have cooperated with universities and explored some effective means including "Go into the campus," "Invited to Baosteel," "Build the platform," and "Hand-in-hand."

1. Go into the campus: Excellent employees are selected to get further study in the universities, narrow their knowledge gap, and develop multiple talents.

Since most of our employees have majors in engineering and technology, they may lack basic knowledge on corporate operation and management. In order to develop comprehensive talents, Baosteel makes the plan and selects excellent employees of youth and middle age from those who hold bachelor's degrees or above, have worked for Baosteel more than three years, and have on-site experience. They will get opportunities to study a second major, master's degree, MBA, or PhD in famous universities. Meanwhile, Baosteel also cooperates with the universities at home and abroad to develop the MBA-OJT program, and OJT programs in finance, marketing, and international trading. For example, our mid- and high-management and financial employees have been trained by CEIBS (the Chinese-European International Business School) and National Accounting Institute, respectively.

Since we import equipment from Japan, Germany, and other European and American countries, Baosteel attaches great importance to employees' foreign language skills. Every year those with good English backgrounds are selected and get intensified training in universities in which they master four basic skills in-

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cluding reading, writing, listening, and speaking. In most Baosteel workshops, it is easy to find a few or even a group of young employees who can communicate with foreign supervisors in English. Engineers, technicians, and management employees with good English backgrounds have opportunities to study in overseas universities and have internships in famous companies. For example, a semester or one-year training is available in the business schools of the University of Pennsylvania and West Virginia University. Some universities like University of California, Berkeley, USA, and the University of Twente, Netherlands, design special programs for Baosteel trainees.

2. Invited to Baosteel: Teachers and experts from universities are invited to Baosteel to develop training materials for employees' further education.

Lecture Invitations: Every year Baosteel invites members of the Chinese Academy of Sciences and those of the Chinese Academy of Engineering, famous professors at home and abroad, and experts in the metallurgical industry to give courses to our engineers and technicians, ranging from new technology achievements to the latest theories to innovation trends. We have invited gurus of management theory from Harvard University and IMD to deliver lectures on competitiveness, strategic leadership, marketing strategy, M&A, etc., in the training program for Baosteel decision-makers. Meanwhile, we invite professors from universities to deliver lectures on macroeconomic dynamics, steel market trends, corporate operation & management, finance, legal affairs, etc. Last but not least, we also arrange humanities lectures to improve our employees' comprehension of humanism.

Adjunct Professors Engagement: Long ago Baosteel came up with a system of inviting university scholars, professors, and experts to give courses and lectures to our employees. Up to now, we have engaged 25 professors as our adjuncts in employee training by means of entering into agreements with Northeast University (NEU), Shanghai Jiaotong University (SJTU) and Anhui University of Technology (AUT). Since the above universities are involved in many Baosteel R&D programs, the professors have accumulated a lot of experience and practical solutions to onsite technical problems. Hence, they are the best supervisors to our engineers in working out technical problems.

Training Materials Development: Our adjunct professors not only give courses, but also co-work with our full-time trainers to develop Baosteel-exclusive training materials and assist in coming up with their key points and framework of fundamental knowledge. Meanwhile, they also prepare instruction books and case studies by means of summing up practical expertise from good examples. All of the above are popular among our employees.

3. Build the platform: We take the R&D projects as the platform on which our employees participate into project development and learn from universities' professors and leading experts to acquire and enhance skills on technical solutions. Moreover, we hold academic exchange meetings and seminars to share the latest R&D achievements and technology trends with employees companywide. Baosteel has invited and engaged eight technology experts with high global reputations as "Baosteel Professors." They are like an important external think tank to Baosteel and technical-solution supervisors to our employees.

4. Hand-in-hand: Baosteel cooperates with universities on degree training.

We have established the "Baosteel Branch" of the graduate schools of NEU and the University of Science and Technology Beijing by cooperating with these two universities. Baosteel employees are also selected and admitted to SJTU by means of a joint Master of Engineering program. Early in 1992, Baosteel set up Baosteel-NEU Further Education Center on Engineering, which is located in Baosteel to service Baosteel and the metallurgical industry countrywide. In 2000 Baosteel set up a High Vocational Technique School with AUT. This school may make the best use of Baosteel resources in training and technology, and innovates training modes. It selects and accepts students from our employees, enables them to get the certificate of college graduation from AUT, the certificate of senior technician, and the graduate certificate of this school. This is a good way to develop high-quality technicians catering to Baosteel's development. In 2001, Baosteel cooperated with NEU again by setting up Baosteel Branch of the Network School of NEU, which has the majors we need to develop technicians at the college-level. The students may get education via remote network access.

In conclusion, we have the following experiences to share:

1. It is good to combine training programs with R&D projects. We develop technicians in the process of R&D, which also promotes converting technology achievements into industry application.

2. It is an effective way to develop technicians in scales by cooperating with universities. The mode of "two-year classroom plus one-year site" helps fresh employees quickly reach the quality the post needs.

3. We will continuously import management gurus from universities for Baosteel decision-makers.

4. Trainees shall attend their training with their questions already in mind. In order to help trainees to get a solution, it is necessary to co-design the training programs with our adjunct professors, in which the action-learning should be applied.

5. The joint training programs shall be developed using project management methodology. Both sides make the plan, do it, check it, and then improve it constantly by PDCA methodology.

Of course, we have also found some issues in cooperation and are trying to work them out:

Example One: In our remote network training programs, instruction time for the employees is very limited, answers to the questions are not enough, and passing criteria of the exam are low, all of which has negative impact on their study quality.

Example Two: Due to outdated knowledge structure of one or two individual adjunct professors, they may fail to meet the trainees' needs and fail to provide good instruction. We make regular assessments on all the adjunct professors and only retain the qualified ones.

In addition, we are making university segmentation by advantages and focus more on planning of sustainable programs step-by-step, instead of "once and finished" projects, which shall be tailored to employees' needs. This means Baosteel's training will attach greater importance to the ability of the employees than

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their education degree. Degree training will no longer be a necessity of Baosteel, which is more likely to be arranged by the employees themselves, while the company provides some incentives. Therefore, programs of degree training with universities will occur far less than before.

Follow-up inquiries may be addressed to fah@baosteel.com.

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