

President's Corner: Implications for Continuing Engineering Education

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

As I reflect on the many conversations of our 13th WCCEE in Valencia Spain (May 16-19), I see a variety of topics that resonated around the hallways and will likely continue to be driving forces in the months/years ahead.

Relevance

There was no doubt, from industry leaders to CEE providers, that the rate of change in today's technologically driven world is impacting the daily lives of engineers and their projects around the world. Engineering projects require quality and the employers and public who use the products demand these standards. A great example comes from the presentation by OpenHydro and Engineers Ireland, recipients of the IACEE Glen L. Martin Award for Corporate Leadership in Continuing Engineering Education, where they are gathering data and computing the return on investment of continuing education to obtain new business and retain existing business.

Global

The conversations were the same from all parts of the world about the needs for CEE. The ability to network with IACEE colleagues around the world, listening to and engaging in their conversations, is advantageous to understanding the social, cultural and other implications in differing regions. Being a member of IACEE certainly greatly helps in these conversations.

Leadership

The ability to innovate and drive workforce and economic growth are areas where we can jointly provide leadership around the

world by providing mechanisms of best practices, illuminating examples of impact and sharing the messages of our stakeholders, engineers and engineering employers. We need to help enable the engineer to work on global projects and help reduce the challenges many face in attempting to be qualified to work in certain geographical areas based upon regulatory issues, not engineering quality.

Future

If you missed the conversations at the 13th WCCEE, you not only missed a wonderful event and location, but most importantly you missed conversations that are shaping the landscape of engineering practice. I invite you to join in these conversations via our organization's website tools. The papers presented will be posted shortly, as will some of the presentations that were captured on video. Attendance at the three pre-conference Workshops also demonstrated that the pulse of the CEE community is increasing based upon the three items described above. I am sure that, by the time of the 14th World Conference on CEE at Stanford University, Palo Alto, California, USA, these conversations will have matured because of the interactions that each of you will contribute.



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2012 IACEE World Conference on Continuing Engineering Education: A Major Success!

Submitted by: *Patricio Montesinos – Universitat Politècnica de Valencia*

The 2012 IACEE World Conference on Continuing Engineering Education took place on 17-19 May in Valencia, Spain. Its host institution was the Lifelong Learning Center (Centro de Formación Permanente) of the Universitat Politècnica de Valencia. On 14-15 May, three pre-conference workshops (Lifelong Learning Marketing, E.learning in Lifelong Learning and the IACEE Quality Management Program) were held. Twenty-one participants shared time, experiences and benchmarking among themselves and the workshops' leaders. The pre-conference workshops were led by Paul Marca (Stanford University, USA), Pat Hall (University of Tulsa, USA), Patricio Montesinos (Universitat Politècnica de Valencia, SPAIN), and Kim Scalzo (State University of New York, USA).

Guoqing, Vice President of the China Association for Continuing Engineering Education (CACEE) and Wim Van Petegem, President of the European Society for Engineering Education (SEFI). IACEE also held its biennial General Membership Meeting on Friday, 18 May. A new IACEE Council was elected to serve from 2012-2014, with 20 members from Belgium, China, Colombia, Finland, Holland, Portugal, Spain, UK and USA.



IACEE 2012 WCCEE Sign Board in the Hall at Upv

Participants	Country	Participants	Country
34	China	2	Germany
20	USA	1	UK
7	Finland	1	Brazil
5	Portugal	1	Australia
5	Spain	1	Switzerland
4	Hungary	1	Poland
3	Denmark	1	Costa Rica
3	Holland	1	Russia
3	Japan	1	Canada
3	Slovakia	1	Singapore
3	Belgium	1	India
2	Norway	1	Venezuela
2	Lithuania	1	Indonesia
2	Mexico	1	Colombia
2	Estonia	1	Italy

Table 1

Up to 114 participants from 30 different countries participated in the 13th WCCEE in Valencia (see table 1). 94 papers were presented during the three days of the conference, divided into four parallel sessions. One of the parallel sessions was presented in Spanish, but the rest were in English, which was the official language of the conference. The Generalitat Valenciana, the Valencian Government, was the Conference Golden Sponsor.

The Glen L. Martin Award for Corporate Leadership in Continuing Engineering Education and the Joseph M. Biedenbach Distinguished Lectureship Award were both presented at the conference. The Biedenbach awardee was Markku Markkula (Aalto University, Finland) and the Martin Award was presented to the OpenHydro company (Ireland). Both awardees gave an inspiring speech about personal and radical innovation and the different ways in which innovation takes place. Both points of view, the personal and the corporate one, were covered.

On the final morning of the conference a refreshing panel discussion was led by Andy DiPaolo (Stanford University) about "Choices and Challenges: Meeting the Education Needs of the Global Engineering Workforce." Three experts participated in the panel discussion: Nelson Baker, President of the International Association of Continuing Engineering Education (IACEE), Zhang

We hope all the participants enjoyed the UPV hospitality and were intellectually refreshing after three days of sharing ideas, problems, possible solutions and pathways. We hope to see all of you at the next World Conference on CEE during the week of 24-28 March 2014 on the beautiful campus of Stanford University in Palo Alto, California, USA!!!



IACEE President Nelson Baker (center) offers a toast at the Gala Dinner. IACEE Vice President Kim Scalzo's right hand responds with a raised glass!

IACEE Council Meeting Highlights, 16 & 19 May 2012

Submitted by: Frank Burris - IACEE Headquarters

The 2010-2012 IACEE Council conducted its final meeting on 16 May, one day before the opening of the 13th World Conference on CEE in Valencia. Subsequently, the formative meeting of the "new" 2012-2014 Council was held on Saturday afternoon, 19 May after the closing ceremony of the WCCEE. The agendas and supporting documents for these meetings are also available to all members (using your username and password) in the File Archive section of the Members' Area of the website www.iacee.org. This newsletter article summarizes some highlights of these Council Meetings in an abbreviated form.

"Old" (2010-2012) Council Meeting, 16 May

- Nelson Baker addressed the importance of the General Membership Meeting (GMM) on 18 May. He will focus his report to the membership on IACEE's recent achievements and a look to the future during the next biennium. Importantly, the GMM will also elect the new IACEE Council for 2012-2014.
- 13th WCCEE General Chair Patricio Montesinos provided the Council with an overview of the pre-conference workshops, the WCCEE program and data on registration and other housekeeping details. Much of this information is reported in other sections of this newsletter.
- Frank Burris presented a membership distribution by country (available in the File Archive section of the website) that makes it very clear that we have major opportunities for membership development in many parts of the world.
- Frank also presented a series of financial reports that point to a stable financial situation in the current environment.
- Past President Mervyn Jones presented a list of five options for the disposition of the Honorary Member classification. After significant council discussion, a motion was passed to eliminate this class of IACEE membership by a vote of 8-7.
- Mervyn Jones presented the nominating committee's slate of candidates for the 2012-2014 Council and discussed the details of the election that will be held on 18 May at the GMM.
- Paul Marca and Andy DiPaolo presented a bid to the Council to host the 2014 WCCEE at Stanford University during the week of 24-28 March 2014. The council enthusiastically accepted the Stanford bid with appreciation and promised to assemble a strong Conference Planning Committee (CPC) to assist in the 2014 conference development.
- Pat Hall reported on significant progress in the development of the CEE Manager Training Program.
- Kim Scalzo also reported progress on the development of the IACEE Quality Program, with significant additions to the website within 2-3 months.
- Kim Scalzo reported that a new Special Interest Group (SIG) Coordinator will soon be appointed. We anticipate a rejuvenation of the SIG activities in the short term.
- The Council approved a motion to substantially alter the nature of institutional memberships. After 1 January 2013

each institutional member will be able to record up to five members of record rather than the one principal contact permitted by our current system.

- \$12,000 has been incorporated in the FY12 IACEE Budget for some level of paid staff. The council approved a motion that empowers President Nelson Baker and Vice President Wim Van Petegem to hire a part-time employee to fulfill the needs of a yet-to-be-created job description and to perform many current headquarters activities.
- Louk Fennis discussed his written report on website development (see File Archive) and the improvements that have been made.
- Frank Burris presented the production plan for the June Newsletter and asked for suggestions for changes to this issue or future issues.
- IACEE Awards Committee Chair Katriina Schrey-Niemenmaa presented an Awards Committee report for presentation of two major awards, which are covered in detail elsewhere in this Newsletter.
- Future meetings changes:
 1. The Fall Executive Committee Meeting, tentatively in conjunction with the World Engineering Education Forum (WEEF) in Buenos Aires, Argentina, 18 and 19 October 2012, will now have to be changed to another time and venue because of the inability of four members of the Executive Committee to travel to Buenos Aires in October.

"New" (2012-2014) Council Meeting, 19 May

- Elections on 18 May added three new members to the Council: Soma Chakrabarti, Paul Marca and Jorge Rojas. These new members plus fourteen returning members convened for three-and-a-half hours after the close of the WCCEE to organize for the new biennium.
- President Nelson Baker proposed re-electing the four vice presidents from 2010-2012 for the new biennium. The council re-elected as vice presidents Linda Krute, Kim Scalzo, Wim Van Petegem and Zhang Guoqing.
- President Baker also proposed re-electing Kim Scalzo as First Vice President and the council acted to approve this action.
- Nelson Baker and Wim Van Petegem will craft a job description for the Secretary General and the council approved the hiring of Frank Burris for this part-time position within the guidelines discussed in the 16 May Council Meeting.
- The existing agreement for Georgia Tech to host the headquarters was extended from 31 December 2012 to 31 December 2014.



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- The council reviewed the 13th WCCEE just completed to find what lessons could be learned for the future. A lengthy discussion was aimed at helping Paul Marca at Stanford in his planning for the next WCCEE. We also discussed at length the disposition of the sessions that were recorded at this WCCEE.

- Paul Marca led a discussion of the preliminary planning for 2014 and the creation of an active Conference Planning Committee.

- In preparation for structuring the new council and making work assignments, Nelson Baker asked each member to openly share their passions for the areas in which they wish to contribute to the council's work. Nelson will take this data and create a new organization chart to guide the council's work in 2012-2014.

- Nelson indicated his intent to revisit our strategic plan early in the next term. He asked each council member to provide status updates for their areas of responsibility in the current strategic plan.

IACEE Council Election and Executive Committee Election Outcomes

Submitted by: Frank Burris - IACEE Headquarters

IACEE members elected the council members that will serve the association for the next two-year period at the General Membership Meeting on 18 May 2012. The new council is composed of 19 voting members plus the Secretary General, who has no vote. Those elected for 2012-2014 are:

President

Nelson Baker
Georgia Institute of Technology, USA

Past President

Mervyn Jones
Imperial College London, UK

Representatives of Regional Leader Organizations (3)

Patricia Hall
American Society for Engineering Education, USA

Wim Van Petegem
European Society for Engineering Education, Belgium

Zhang Guoqing
China Association for CEE, China

Representative of Professional Organizations & Societies (1)

Katriina Schrey-Niemenmaa
Academic Engineers & Architects in Finland – TEK, Finland

Representative of Industrial Organizations & Companies (1)

Feng Aihua
Baosteel Group Corporation, China

Representatives of Academic Institutions (8)

Ed Borbely
University of Michigan, USA

Linda Krute
North Carolina State University, USA

Paul Marca
Stanford University, USA

Kirsti Miettinen
Aalto University, Finland

Patricio Montesinos
Valencia University of Technology, Spain

Phil O'Leary
University of Wisconsin – Madison, USA

Jorge Rojas
Pontificia Universidad Javeriana, Colombia

Kim Scalzo
State University of New York, USA

Representatives of Individual Members (4)

Sue Bray
New Vistas, USA

Soma Chakrabarti
University of Kansas, USA

Louk Fennis
Netherlands Institute for CEE (Retired), Netherlands

Alfredo Soeiro
University of Porto, Portugal

Secretary General

Frank Burris
IACEE, USA

On 19 May the new council held its formative meeting and elected four vice presidents from the Council: Linda Krute, Kim Scalzo, Wim Van Petegem, and Zhang Guoqing. From among this group, Kim Scalzo was elected First Vice President. In addition, Frank Burris was approved by the council for another two-year term as Secretary General. President Nelson Baker, Past President Mervyn Jones, the four Vice Presidents, and the Secretary General constitute the seven member IACEE Executive Committee, which handles IACEE business between meetings of the full council.

If you have interest in serving on the IACEE Council in the future, please register your interest with Mervyn Jones and/or Frank Burris well in advance of the 2014 election. We need your ideas and more geographic diversity!

Preparing Engineers for Global Teams: Can CEE Programs Take the Lead?

Submitted by: Sue Bray and Diane Landsiedel - Keys 2 Culture



Diane Landsiedel

The Need

We are in the midst of a change in the workplace that is profound and pervasive. Michael Hill, former Chancellor of the University of North Carolina, once spoke of "structural changes" that take place in society that are so intense that things will never go back to the way they once were.

Products can cause these changes. Think of the far-reaching impact of television or the automobile. Social movements like the Industrial Revolution or the Women's Movement can do the same. Today's engineers are facing such a change, which we refer to as a "new sociology of work." They find themselves working in global economic enterprises and on teams that are cross-cultural in nature and that interact in virtual, technology-driven environments. A number of factors have come together to create this new reality: the global economy; advances in virtual communication; and changing demographics.

"Because of the increasing complexity and scale of systems-based engineering problems, there is a growing need to pursue collaborations with multidisciplinary teams of experts across multiple fields. Essential attributes for these teams include excellence in communication, ...an ability to communicate using technology, and an understanding of the complexities associated with a global market and social context."

"The Engineer of 2020,"
U.S. National Academy of Engineering

This "structural change" in the workplace has overtaken us almost without notice, and we are now catching up. But we are beginning to learn some of the factors that make for success in global teams. We do know this: technical brilliance is not enough and the ability to work effectively with people across time, distance, and culture must be factored into engineering education. How well are we doing this? A recent survey of white-collar employees in multi-national companies indicated that the vast majority of these employees have encountered challenges in virtual work, but only 16% had any training at all to prepare them.

The need for the inclusion of global competencies in engineering education is widely recognized, but not yet realized. Continuing Engineering Education (CEE) programs are in a position to show leadership in this critical area. CEE programs are flexible and agile, and often are the harbingers of key new trends in engineering education.

The Challenge

A recent review of the literature attests to the agreement among engineering educators that more needs to be done to better prepare engineers for global work. In his seminal report "Engineering for a Changing World," James Duderstadt argues that today's complex challenges require engineers to have a much higher level of education, particularly in professional skills such as global engineering practice. Grandin and Hirleman's "Educating Engineers as Global Citizens: A Call for Action" reports that there is not only a need for global engineering education, but there is



Sue Bray

also an urgency for it. In the final report of the Global Engineering Excellence Initiative sponsored by Continental AG, a consortium of eight universities spanning four continents recommended "global competence" as one of four critical challenges to better prepare engineering graduates for global practice. The GEE study also found that only the most adventurous engineering students are taking advantage of programs offered by universities to provide international experiences. And the Institute of International Education reports only 3.9% of U.S. engineering students participated in study abroad programs in 2011.

Business and industry are operating around the clock, seven days a week, leveraging valuable engineering resources to satisfy their international customers and suppliers. Global networks and teams are integrated into the modern practice of engineering and operating at full speed every day. Still, it is common for industry leaders to complain that engineers are not prepared to function effectively on global teams.

Learning to Manage and Lead Global Engineering Teams

Global teams are composed of engineers from different countries, cultures, and time zones. They function in a coordinated fashion from widely distributed geographical locations and rely on technology as their primary means of communication. Managing and leading these teams is complicated and challenging. It requires an ability to collaborate effectively with people who think, act and behave differently. It also requires a highly developed skill for unleashing the knowledge, creativity and technical problem solving expertise of these teams to achieve desirable work outcomes.

There is a growing body of knowledge and research on effective global teams but more thought is needed to consciously structure these environments and to prepare engineers for virtual work. Research collaboration, internships and study abroad programs have been added to the traditional engineering sciences curriculum but they often focus on cultural immersion or face-to-face teamwork. There is a growing effort to form global teams for capstone engineering project courses but these efforts are nascent and remain very limited in number.

"My traditional engineering curriculum did not provide any instruction for creating consensus with a large group of highly technical and occasionally opinionated engineers. After going through the ELITE program, I was far more aware of potential cross-cultural issues, effective communication styles and their impact on distributed teams. I have found the use of these tools in addition to very explicit communication has helped to create trust, and furthers the effectiveness of all the teams I participate on now."

Marcia Brueggenjohann, Manager
WPX Energy

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There are some examples, however, of CEE providers that are addressing this important emerging need. The University of Tulsa's Continuing Engineering and Science Education Program offers the "Executive Leadership Institute for Engineers (ELITE)." This program includes a module on global leadership that helps engineers consider their own competencies for cross-cultural work, as well as an in-depth look at the issues facing distributed teams. This work has been well received by the engineers and has proven to be very helpful for companies internally as well as working with companies globally.

The GM Technical Education Program has collaborated with several universities to integrate global leadership seminars and a global, job-related capstone project course into several technical graduate level degrees customized for the automotive industry. The University of Michigan Continuing Professional Development organization has also recently added workshops on managing and leading global teams to its program offerings. Important efforts are underway elsewhere, yet we are just beginning to address this need to better prepare engineers for global work.

Continuing Engineering Education Helps to Build Global Competence

We think CEE providers are poised to help broaden engineering education and to lead the way to curriculum reform for global competence. CEE programs can build on our developing awareness of what makes for success in global teams: value of an intercultural mindset; awareness of what makes for effective virtual meetings; a new style of "ambassadorial" leadership; predictable communication patterns; development of "swift trust;" mindful use of collaboration technologies; and use of the "International English," – just to name a few.

CEE programs can quickly and easily reach engineers around the world with the relevant content to develop core global competencies for engineering. Engineers who complete these programs will be able to immediately apply what they have learned to their global teams. CEE providers can also improve the quality of the content in these areas by gathering information about the course outcomes and by measuring their overall effectiveness. CEE's role in helping to prepare engineers for global work is not only logical; it is crucial.

Conclusion

Advances in technology and an international economy have made global teams an everyday reality for engineers. For those organizations that employ them successfully, global teams represent a key competitive asset. Individuals who can perform on and lead these teams will be much sought after. However, there are great risks inherent in the cyberspace and cultural terrain that such teams inhabit.

As already noted, leading engineering educators have recognized that it is critical to develop global competencies as part of our engineering programs. Such programs would help our engineers not only accept, but embrace culturally different perspectives leading to the creation of new and exciting solutions to the great challenges we all face. They would enable engineers to harness the power of collaboration technology and use it to humanize the virtual workplace and to exploit the tremendous access and power it provides. Consciously preparing engineers for this work environment will unlock the potential of an inter-connected world.

CEE professionals can play a pivotal role in addressing this emerging need in engineering education by offering, promoting and measuring the effectiveness of global teams programs for new graduates and practicing engineers. With greater flexibility to design and test programs, they can create exemplars of content and approaches to address the ever-spreading phenomenon of global teams. And who better than the IACEE – focused on continuing engineering education in a global context – to lead the way into this future?

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Joseph M. Biedenbach Distinguished Lectureship Award Presented to Markku Markkula

Submitted by: Katriina Schrey-Niemenmaa - Helsinki Metropolia University of Applied Sciences

This award honors the memory of Joe Biedenbach, an initiator of the series of World Conferences on CEE and a founding member of the IACEE Council, who demonstrated tireless efforts to promote continuing engineering education throughout his career.

This same characteristic describes Markku Markkula, who is known to many, having been Director of the Lifelong Learning Institute Dipoli of the Helsinki University of Technology (TKK) for many years while also working as the first Secretary General of

IACEE, 1989-2001. Markku has been an innovative forerunner and demonstrated vision focusing on how professional development and lifelong learning are essential cornerstones for the sustainable development of global work communities and societies. His activities are at many levels:

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He works at the university, in his home city, in his own country, in Europe and across the world. He is a master of finding and creating connections between different initiatives and thus inventing the future through co-creation and strategic networking.



Currently Markku works within Aalto University, Finland as the Advisor to Aalto Presidents, focusing on issues of European strategic development. He is a former member of the Finnish Parliament (1995-2003) and was a member of its Committee for Education, Science and Culture and the Committee for the Future. As an MP, his international role included the Presidency of the European Parliamentary Technology Assessment Network.

In Finland his role has included memberships of the boards of several companies and other organizations, which include Tekes, the Finnish Funding Agency for Innovation and Technology. He has also been the Chairman of the Espoo City Council and its Planning Board, as well as the Chairman of the boards of the Finnish Association of Graduate Engineers TEK and the Finnish Information Society Development Centre TIEKE.

Markku is a member of the EU Committee of the Regions CoR and is the Chairman of the EU 2020 Strategy Task Force of its largest political group, the European Peoples Party (EPP). He is also a member of the Commission for Education, Youth, Culture and Research, and the Commission for Economic and Social Policy. His CoR role also includes being the Rapporteur on the Digital Agenda for Europe, the Rapporteur on the role of local and regional authorities in achieving the targets of the Europe 2020 strategy, as well as the Rapporteur on the Horizon 2020 (renewal of the EU research programs).

As a tribute to his achievements in 2008 Markku Markkula was elected to the International Adult and Continuing Education Hall of Fame.



In his Distinguished Lecture at the 13th World Conference on Continuing Engineering Education, Markku highlighted the importance of an open mind and sharing. He told us the story of triangles using the new virtual reality software. His story was about inventing the future, i.e. co-creating new solutions by building on solid wide bases with inspiration. His story showed how he combines old and new management theories with weak signals arising from the networks and how he uses social media actively to collect information and share mental, physical and virtual workspaces. Our warmest congratulations to Markku. We hope he will continue many more years with this important mission.

Glen L. Martin Award for Corporate Leadership in Continuing Engineering Education

Submitted by: Alfredo Soeiro - University of Porto; Photo by: Louk Fennis

This IACEE award honors the memory of Glen L. Martin, a founding corporate member of the IACEE Council. It is awarded to a company at each World Conference on Continuing Engineering Education whose support for CEE demonstrates world class leadership and whose CEE practices and programs serve as models for companies throughout the world. The award also promotes CEE worldwide by honoring exemplary practitioner companies.

The choice for the WCCEE 2012 is OpenHydro Tidal Technology Ltd., Dublin, Ireland (<http://www.openhydro.com>). The company is also the CPD Company of the Year 2012 from Engineers Ireland (www.engineersireland.ie). The company is also ISO9001 accredited in 2008.

Concerning the main criteria of the award, OpenHydro has demonstrated top management commitment to CEE, support for CEE and participation in CEE. In 2009, OpenHydro launched their corporate Performance Management and Objective Setting process. The CEO drove the process, top down, role-modeling its implementation and clearly setting the expectation that this was a managerial responsibility which would contribute to organizational success. For the second criterion, that CEE programs demonstrate vision and are linked to and integrated with corporate strategy to continuously improve products and services, OpenHydro has established a transition from an R&D organization to become a commercial business capable of supplying turbines at

volume to satisfy the demands of international energy providers. To enable this ambitious company-wide transformation to take place, CPD was central in meeting the following objectives:

- Ensuring all employees within the organization had clarity and alignment behind the overall strategic goals of the organization;
- Aligning the training and development plans for employees with the strategic imperatives of the organization, with a particular focus on commercial awareness, project management rigor and financial management during the crucial growth and expansion period;
- Scaling the team while ensuring no compromise in the integrity of our culture and the quality of the new recruits;
- Facilitating the efficient integration into the organization of new recruits; supported, guided and mentored by their peers and colleagues to ensure that they optimized their capabilities in the shortest possible period of time;



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- Building succession planning into the business – ensuring that it is developing tomorrow’s leaders for OpenHydro today.

Another main criterion is related with world-class programs, leadership and innovation in CPD program development and delivery. In November 2011, OpenHydro won a Global CleanTech Cluster Association Award in the renewables category. One of France's largest utilities, EDF, has recently collaborated with OpenHydro, deploying its tidal technology to create the world's largest tidal wind farm off the coast of Paimpol-Bréhat, France. A fourth main criterion is related with the investment in a corporate culture of

willingness to free people at all levels for education and training. In OpenHydro an average of five-and-a-half days of CPD for all engineers and technicians was recorded in 2009 and 2010. Every staff member maintains a CPD log as required under corporate CPD policy.

OpenHydro has shown beyond any doubt that it has recognized the importance, even as a small organization, of investing in CPD for employees to support both their development and growth. For further information contact Roisin Foley, roisin.foley@openhydro.com, TEL: +353 42 9383372.

IACEE Financial Report for 2012 Year-to-Date

Submitted by: Frank Burris - IACEE Headquarters

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

Balance Forward on 1 January 2012	\$28,835.25
Dues Income	\$6,924.16
IACEE Quality Program Fees	\$5,450.00
Other Miscellaneous Income	\$9.03
TOTAL INCOME	\$41,218.44
Vieth Consulting Website Modifications	(\$495.00)
Vieth Consulting Fees (website, MMS, etc.)	(\$250.00)
Wells Fargo Bank & PayPal Fees	(\$513.30)
Staff Travel	(\$1,907.45)
Professional Association Memberships (IFEES)	(\$500.00)
31 January Executive Committee Meeting	(509.88)
TOTAL EXPENSE	(\$4,175.63)
NET	\$37,042.81

While we do not yet have a final accounting from the recent 13th WCCEE, preliminary indications are that IACEE will net approximately \$11,200 additional from the World Conference in Valencia, thus bringing the NET line to more than \$48,200.

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

Upcoming CEE Events

World Congress on Engineering

4-6 July 2012; London, UK

SEFI Annual Conference

23-26 September 2012; Thessaloniki, Greece

World Engineering Education Forum (WEEF)

15-18 October 2012; Buenos Aires, Argentina

CIEE Global Perspectives: Developing strategic initiatives, educating for a world economy

14-17 November 2012; Shanghai, China

Welcome to New IACEE Members and Membership Report

Submitted by: Frank Burris - IACEE Headquarters

IACEE is very pleased to welcome eleven new members who have joined the Association between 1 March 2012 and 31 May 2012.

Member Type 3: Industrial Organizations & Companies

CD-adapco
Tammy de Boer, USA

Member Type 4: Academic Institutions and Other Coordinators and Providers of CEE

Fund of BMSTU Graduates in Support of Education
Sergey S. Gavriushin, Russia

ITESM
Ricardo Gutierrez Mercado, Mexico

Member Type 5: Individual Members

Said AbuBakr
Western Michigan University, USA

Cynthia Shoemaker
Southern Maryland Higher Education Center, USA

Rodolfo Solis
Central American Institute of Technology, Guatemala

Hanna-Riikka Myllymaki
Aalto University, Finland

Ragne Kalamees
Tallinn University of Technology, Estonia

Ingrid Koks
Tallinn University of Technology, Estonia

Zhang Yuzhen (George)
SINOPEC, China

Petri Lyytikainen
Aalto University, Finland

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In addition to these eleven new members, approximately forty-five (45) new individual members will be added to the IACEE membership rolls as a result of their non-member registrations for the 13th WCCEE this past May in Valencia. These new members will be recognized in the September newsletter.

Current total IACEE membership stands at a level of 170 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	48
Type 5: Individual Members	109

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.

These 170 members hail from 35 different countries, with the distribution shown:

USA	64
China	29
Finland	12
Japan and Singapore	6
Canada	5
Brazil, Netherlands, and Russia	4
Austria, Belgium, Denmark, Estonia, India, Mexico, Philippines, Portugal, Saudi Arabia, and Spain	2
Argentina, Australia, Colombia, Guatemala, Germany, Hungary, Indonesia, Israel, Kenya, Norway, Romania, Slovakia, Sweden, Switzerland, Turkey, and UK	1

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 in 2012!

SEFI and Engineering Education in Europe

Submitted by: Françoise Côme and Wim Van Petegem - European Society for Engineering Education

IACEE had ten professional organizations as founding members who signed its charter in Beijing in 1989. Over the span of 23 years, three of those founding members have maintained a high level of involvement and are now known as Regional Leader Organizations: SEFI, ASEE and CACEE. It is the intent of the IACEE Newsletter to publish a brief series of feature articles describing each of these three RLOs. The first such featured RLO is SEFI, the European Society for Engineering Education, and the SEFI story appears below.

Engineers, educated to find the best solutions to the challenges of mankind, need to work hard to remain on top of the developments in their respective fields. A career of lifelong learning is demanded from engineers more than in any other discipline. The influence of the Bologna process resulting in an increased mobility and in a competition for the best students also has a strong influence on the education of the engineers in Europe. Consequently, educational innovation and international cooperation in higher engineering education have more and more importance. In these areas, the European Society for Engineering Education – known with the French acronym "SEFI" (Société Européenne pour la Formation des Ingénieurs) – which is the widest European engineering education network, has developed a lot of expertise over the last 40 years.



Founded in Belgium in 1973 by 21 Faculties of Higher Engineering Education (HEE), SEFI is an international, not-for-profit organization with the mission to contribute to the development and the improvement of engineering education in Europe. SEFI promotes information exchange about the current developments in the field between teachers, researchers and students in the various European countries, develops the cooperation between the higher engineering education institutions and promotes cooperation with industry acting as a link between its members (institutions of HEE, companies, students, professors, professional engineers, international organizations) - in total 408, in 47 countries - and other scientific and international bodies. Today, the SEFI network

connects around 1,000,000 students in engineering education and 158,000 staff members. SEFI promotes the idea of a European dimension in engineering curricula and of excellence in engineering education, and it acts for the visibility of European engineering education in a global world.

The objectives of the society are achieved through a series of activities developed by its working groups and committees on topics such as curriculum development, continuing education and lifelong learning, physics, mathematics, gender and diversity in EE, attractiveness of HEE, ethics in HEE, information and communication technologies, accreditation and quality assurance, sustainability of HEE, research and HEE, university-business cooperation, cooperation with the students, cooperation with Africa, etc.

Those activities include, amongst others, an annual conference. The 2012 Annual Conference (Thessaloniki, 23-26 September) will feature the theme of "Engineering Education 2020: Meet the Future." The conference will welcome a series of high-level keynote presentations and will host several interactive workshops and parallel or poster sessions, related to the topics mentioned (www.sefi2012.com).

Since 2005, SEFI also organized Conventions for Deans in Engineering, the last one being held in 29-30 March 2012, in co-

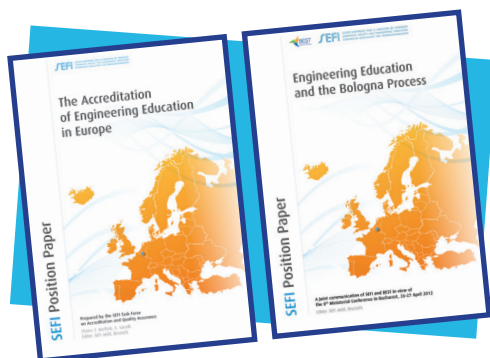


Françoise Côme

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operation with the University of Birmingham and CESAER¹ on the theme of "Tomorrow's engineers – for an attractive Europe: Working Together to Build on Europe's Excellence in Engineering Education and Research."

In order to expand its expertise, SEFI participates together with its members in several European projects mainly under the EC LLP² Programme (EUGENE³, ECDEAST⁴, EU-Drivers⁵, MODERN⁶, STECET⁷...). Furthermore, it disseminates the new insights on engineering education through its bi-monthly scientific journal (the 'European Journal of Engineering Education' published by Taylor and Francis), a monthly electronic information newsletter, an annual report and a series of documents and position papers.



At the beginning of 2012, SEFI published a position paper on "The Accreditation of Engineering Education in Europe." More recently, SEFI addressed the policy makers in charge of the Bologna process and published, in cooperation with BEST⁸, a joint communication on "Engineering Education and the Bologna Process"

that has been circulated to the participants of the 2012 Bologna Ministerial Conference held in Bucharest last April. Our recommendations refer to topics such as "Promoting Interdisciplinarity and Transdisciplinarity," "Emphasising Engagement" and "Stimulating Entrepreneurship and Innovation." In this document, SEFI and BEST support the direction in which the Bologna Process is leading engineering education whilst emphasising a series of actions to be encouraged and implemented in the European Higher Engineering Education Area. All the papers are available on the SEFI website.

On a regular basis, SEFI is invited to participate in the public consultations organised by the European Union about the future of their Educational and Research programmes, e.g. the new "ERASMUS for All" programme.

In the recent past, SEFI has supported the creation of the European Institute of Innovation and Technology, a well-established body of the European Union that has the mission to increase European sustainable growth and competitiveness by reinforcing the innovation capacity of the EU.

Throughout its history, SEFI has participated in the creation of new bodies and organizations such as EuroPace, IACEE⁹, ENAEE¹⁰ or IFEES¹¹, and very recently (September 2011) of the European Engineering Deans Council (EEDC), hosted in and directed by SEFI Headquarters.

In 2011, in cooperation with IFEES, SEFI has created IIDEA, the International Institute for Developing Engineering Academics.

The international cooperation is of course one of the priorities of SEFI and in this framework, it maintains regular contacts and encourages exchanges with major bodies such as the European Union (European Commission), the Council of Europe or UNESCO and with partner or sister organizations, in addition to those mentioned earlier in this article, such as ASEE¹², ABET¹³, IGIP¹⁴, JSEE¹⁵, KSEE¹⁶, CSEE¹⁷, RAEE¹⁸, FEANI¹⁹, WFEO²⁰, etc.

Presently, SEFI is encouraging its members to contribute to the definition of its core values, to the development of the SEFI 2020 Strategy and the preparation of the SEFI 40th Anniversary that will be celebrated on the occasion of the Annual Conference in Leuven, September 2013.

For any further information, please contact SEFI aisbl, 119 rue de Stasart, B-1050 Brussels, info@sefi.be, visit www.sefi.be and the SEFI Facebook page, join the SEFI LinkedIn group or contribute to the SEFI Blog and newsletter.



Wim Van Petegem

¹Conference of Engineering Schools for Advanced Engineering and Research

²Lifelong Learning Programme

³Academic Network European and Global Engineering Education

⁴Engineering Curricula Design aligned with EQF and EUR-ACE Standards

⁵European Drivers for a Regional Innovation Platform

⁶European Platform Higher Education Modernisation

⁷Science and Technology–European Cooperation in Education and Training 2012

⁸Board of European Students in Technology

⁹International Association for Continuing Engineering Education

¹⁰European Network for the Accreditation of Engineering Education

¹¹International Federation of Engineering Education Societies

¹²American Society for Engineering Education

¹³Accreditation Board for Engineering and Technology

¹⁴Internationale Gesellschaft für Ingenieurpädagogik

¹⁵Japanese Society for Engineering Education

¹⁶Korean Society for Engineering Education

¹⁷Chinese Society for Engineering Education

¹⁸Russian Association for Engineering Education

¹⁹Fédération des Associations Nationales d'Ingénieurs

²⁰World Federation of Engineering Organisations

IACEE Calendar Items

Mid-Winter Meeting (in conjunction with CIEC)
8-9 February 2012
Phoenix, Arizona, USA

IACEE Website Issues

Submitted by: Louk Fennis (with thanks to Soma Chakrabarti - University of Kansas)

Every organization with a website likes to know from time to time how the site is doing: number of visitors, frequency of visits, geographical distribution, etc. Of course, IACEE also likes to know these figures and our web hosting company offers the tool for that. Bearing in mind that IACEE is a global, but relatively small organization, the following statistics might interest you.

Since the beginning of this year 2012, at the moment this newsletter contribution is written (end of May), the site had about 4,000 unique visitors and the number of visits was about 6,500, which means a little more than 1.6 visits/visitor. The statistics can show a monthly history, distribution over the days of the week and even an hourly history. However, the latter has relatively less significance because visits to the site of a global organization go on around the clock.

The distribution of visitors by country is significantly more interesting. Since 1 January 2012, our site had visitors from 100 different countries. Most visitors were from the USA, followed by China. Surprisingly enough, Romania and Ukraine are 3rd and 4th, although IACEE has only one member in Romania and none in Ukraine. Apparently, some Romanians and Ukrainians like to poke around our site once in a while.

75% of the visits have a duration of less than 30 seconds; apparently because the visitor realizes he is on the wrong site. Fortunately, the remaining 25% spend more time: about 10 minutes

on average. Apart from the homepage, the most frequently visited page is the Photo Album. If you have not yet noticed it, pictures from our May WCCEE in Valencia have been loaded. And the top download is the quarterly IACEE newsletter, followed by minutes of council meetings and executive committee meetings. The top search keywords/phrases are, not surprisingly, "iacee," followed by "marina bay rooftop swimming pool Singapore;" indeed that infinity pool was a highlight in IACEE history!

These all are statistics. They don't tell your opinion about the site, or your satisfaction with it. Therefore, we will invite you in a couple of weeks to log-in as a member, and go in the Members' Area to Surveys. There, you will find a survey about membership and website satisfaction. Please help us to maximize member benefits and website effectiveness by answering the questions.

And what about our IACEE app? In cooperation with our host company, we launched an app for iPhone and Android phones. It has been downloaded about 50 times, so by roughly 1/3rd of our membership. That seems like not too many, but it makes the app one of the most exclusive in the world! Please download it and benefit from the social media possibilities! A Blackberry version has been developed and submitted for approval, but now, a few months later, still no answer has been received.

Use your website to the fullest!



Louk Fennis



Soma Chakrabarti

Did You Know That...

Submitted by: Frank Burris - IACEE Headquarters

• IACEE Member Miguel Angel Yadarola, from Argentina, ends his presidency of the Pan-American Academy of Engineering (API) in Mexico City next October, after 12 years in office. Miguel is also a past member of the IACEE Council. Near the end of the eighties, a group of engineers from UPADI (Pan-American Federation of Engineering Societies) initiated an academy that would summon qualified engineers to unite talents, capabilities and experiences for the service of the countries' development, improve life quality, overcome technological delay and eradicate the poverty of its peoples. The Pan-American Academy of Engineering (API) is the first professional corporation of an international nature that joins individual engineers from different countries. Because of his excellent performance as Founder and President, Miguel Yadarola was awarded by API at the end of 2010 in Buenos Aires with the first title of Emeritus Academician.

• IACEE's founding Secretary General Markku Markkula, of Aalto University in Finland, was honored on 17 May 2012 with the IACEE Joseph M. Biedenbach Distinguished Lectureship Award. This award was made exactly 23 years to the day after Markku and Joe Biedenbach were photographed signing the original charter for IACEE at the 4th World Conference on CEE in Beijing on 17 May 1989. Further details may be found in another article in this newsletter.

• The Members' Area of the IACEE website www.iacee.org, which is accessible to every IACEE member using his/her username and

password, contains a Member Directory through which all pertinent contact information for all IACEE members can be obtained. The Members' Area also contains a File Archive section that contains agendas and supporting documents for recent meetings of the IACEE Council and the IACEE Executive Committee, along with other important items such as the strategic plan and the IACEE Quality Program. A Quick Reports section is also available that allows members to access a wide variety of lists of members of various types, etc.

• Minutes of IACEE Council and Executive Committee meetings are posted on the IACEE website and may be viewed by any site visitor, not just members, by clicking on Officers on the homepage and then on Minutes of Meetings.

• IACEE Newsletters are also available to all website visitors, not just members. Click on Publications on the homepage and then on IACEE Newsletters.



Frank Burris

Tips for Successful Training Partnerships between Universities and Industries

Submitted by: Patricia Hall - American Society for Engineering Education

Continuing engineering educators must cooperate with industry to understand, develop, and meet their training needs. Industry often tells university providers that they do not like working with them. Why is this?

As a leader of IACEE's Special Interest Group (SIG) on University/Industry Collaboration and as a provider of training from a university, I would like to share a few tips to becoming a better partner to industry.



Patricia Hall



Save the date!

14th World Conference on Continuing Engineering Education
March 24-28, 2014 Stanford University

- Explore innovative solutions for online and mobile education
- Share lessons learned from industry/academia partnerships
- Attend interactive workshops to enhance your organization's continuing engineering education enterprise
- Learn how to measure quality and return on investment for continuing engineering education

presented by **The International Association for Continuing Engineering Education**



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iacee2014.stanford.edu

#1: Build trust – Listen to your potential partner and focus on a win/win approach.

#2: Be flexible – This is important in five areas – a) content; b) format; c) delivery; d) cost; e) instruction.

#3: Meet industry goals – What are the outcomes they want to clearly identify? Can your program help industry do one or more of the following? 1) Increase production/productivity; 2) Reduce costs; 3) Save time. All of these improve the company's profits.

#4: Lessons learned –

- Don't over promise
- Know the decision maker
- Everyone must agree on the outcomes
- Choose your battles
- Document!

#5: Reasons partnerships may not work –

- Too much "red tape"
- Not flexible
- Can't deliver what they want, when they want it

As you can see, communication is the key to greater success and particularly in a global marketplace and environment. And, I believe the communication should be between three entities – the provider, industry representative or SME and the instructor/faculty member. Working with faculty in partnerships would be a whole other article.

I invite you to join this SIG today! Go to the IACEE website at www.iacee.org. We would like to hear your tips and share some partnerships that worked...and some that did not! We can all certainly learn from one another to create better university/industry partnerships.

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