Dear Friends and Colleagues,

There has never been a more dynamic and exciting time to be an engineer! The growth of young people entering our profession has been remarkable globally in the last decade and the demand continues to grow. With the formulation of the Sustainable Development Goals by the United Nations this past fall, engineers have never been needed more to help develop the energy, water, food, shelter, and other needs of humankind in the coming century.

IFEES and GEDC are the two truly global organizations that bring together the world’s engineering educators and leaders of engineering schools and colleges under one joint umbrella. Our collective goals, as two closely related organizations, are to create an active and visionary forum that enables engineering educators, researchers, leaders, and practitioners to collectively better the global society of the 21st century. Included among these goals are (1) the coordination and elevation of engineering curricula worldwide to foster mobility of students, (2) sharing effective practices in both engineering education and international collaboration of research teams in solving global and sustainable grand challenges, and (3) helping to empower the global community by building educational, research, and scholarly capacity in engineering. As such, the power of IFEES and GEDC lies in the network of committed engineering educators, scholars, and leaders to build up the global engineering community.

As leaders of our respective organizations, we are pleased to join forces in promoting and publishing this first joint IFEES/GEDC Bulletin entitled “GlobalEngineer.” We believe it captures well the spirit and aspirations of our organizations and continued partnership. We invite all of you receiving this Bulletin to find opportunities to engage with us and our respective networks. One such excellent opportunity is the combined Annual World Engineering Education Forum (WEEF) and GEDC Annual Conference to be held this November 6-11, 2016, in Seoul, Korea. The theme of this Conference is “Engineering for a Smart Society,” a critically important topic as the world becomes increasingly connected and instrumented for understanding how we all interact with and impact each other. Specific topics to be focused on include Industry 4.0, the Industrial Internet and Cybersecurity. IFEES and GEDC both aim to provide conferencing and networking opportunities unsurpassed for the global engineering educator and leader. Please join us in Seoul.

In addition to Seoul, our organizations are actively engaged in many other regional and local activities around the globe. Help us and the global engineering community make the world a more prosperous and healthy community in 2016 and beyond.

Uriel Cukierman
IFEES President, 2014-2016

Peter Kilpatrick
GEDC Chair, 2015-2017
WEEF & GEDC
2016, Seoul


Nov. 6 ~ 10, 2016
COEX, Seoul, Korea

ABSTRACT SUBMISSIONS DUE MAY 2.
CALL FOR NOMINATIONS

GEDC Airbus Diversity Award

Have you or your team started an initiative to make engineering schools more diverse and inclusive? If you’re closely involved with a project that’s been successful in increasing representation of all types of diverse people within your institution, then we want to celebrate your achievements and share your work with the world.

Apply for the 2016 GEDC Airbus Diversity Award

- Download the Application Form and Brief for Applicants
- Make sure that your project, or your team’s project meets all the criteria for the Award
- Complete the application form, and send it to candidate@gedcairbusdiversityaward.com by 12 (noon) GMT on June 30, 2016
- Remember to include all supporting material with your application form

After all applications are received, the judging panel will select up to 10 shortlisted candidates. The shortlist will be announced in September 2016. At this stage, all shortlisted candidates will be required to have their selection formally supported by a Dean of Engineering.

Three finalists will be selected to present their projects to a distinguished jury at WEEF&GEDC 2016 Seoul. The finalists will be celebrated at the GEDC Airbus Diversity Award dinner, as part of a gala evening celebrating diversity in engineering education, where the 2016 Award recipient will be announced.

One candidate will be awarded USD 10,000 and two others USD 1,500 each. This is intended to both recognize their work in the field to date, and support their continuing initiatives.

IFEES Duncan Fraser Global Award for Excellence in Engineering Education

The IFEES Duncan Fraser Global Award for Excellence in Engineering Education recognizes individuals who have made innovative and meritorious contributions having a significant impact on the advancement of engineering education. IFEES encourages nominations of outstanding candidates from all regions of the world.

The 2016 Global Award will be presented during the annual IFEES Awards Dinner at WEEF&GEDC 2016 Seoul. The winner will receive a medal, a citation, a one-time monetary prize of USD 1,000, a roundtrip, economy class air ticket and three nights lodging to receive the reward.

Eligibility

It is not necessary for the nominee to be a member of an IFEES member society; however, the nominator must be the representative of an active IFEES member society. A list of member representatives may be found on the Members page of the IFEES website.

The IFEES Duncan Fraser Award Committee will accept nominations until May 30th, 2016.

The nominator may nominate only one individual for the award. The nomination package must include:

- Letter of Nomination
- Rationale and Statement of Impact
- CV of the nominee
- Three letters of support

The completed nomination package must be submitted by e-mail to the Committee Chair, Linda Krute (ldkrute@ncsu.edu) and IFEES Secretary General, Hans-Jürgen Hoyer (h.hoyer.ifees@gedc.info).

For more details about the Award, please visit the IFEES website.
In 2016 the Global Engineering Deans Council (GEDC) will vote for a Chair Elect; Secretary/Treasurer; and six Executive Committee members. The deans elected to Executive Committee positions will serve on the Committee for three years, from November 2016 until late 2019. The dean elected as Secretary Treasurer will serve for one year, from November 2016 until October 2017 with the possibility for re-election for up to two more one-year terms. The Chair Elect will serve for one year, two years as Chair and one year as Immediate Past Chair.

We need to develop a list of candidates no later than the close of business on **Friday, June 17, 2016**, to enable the GEDC Nominating Committee to select a slate of candidates to stand for election to these positions. We expect to send the ballots with bios, photos and a brief statement of rationale for their candidacy to GEDC members by July 8, 2016. Deadline for receiving votes will be September 15, 2016 and votes will be counted soon thereafter.

GEDC members can offer suggestions for possible candidates by using the instructions below for submitting names to the Nominating Committee. *Nominations will only be received from GEDC members who have paid their membership dues for the current Calendar Year (Jan 2016 - Dec 2016).* If any members will have trouble paying their dues by the deadline, please contact Hans-Jürgen Hoyer.

**Qualification Requirements for Nominees:**

Each Nominee at the time of nomination must be a "Regular GEDC Member" who has paid their annual membership dues. The list of GEDC Members can be obtained from the [GEDC website](http://www.gedcouncil.org).

**Nomination Submission Procedures**

Up until the Close of Business on Friday, June 17, 2016, members of the GEDC (Regular and Associate) may submit recommendations to h.hoyer.ifees@gedc.info, copying email of committee chair Paul Feigin (vpsp@technion.ac.il).

1) Write in the Subject Line: 2016 GEDC Nominations

2) List the dean(s) you would like to nominate for the vacancies:

   - Chair Elect; Secretary/Treasurer; and Executive Committee

   - Next to each name provide a brief rationale for recommending their candidacy

   - If you are nominating yourself, please attach a half-page biography to your email

   - If you are nominating someone other than yourself, the GEDC Secretariat will contact the nominee to verify his/her willingness to serve and to obtain biographical information.

   - Please be reminded that *neither* Associate Members *nor* Corporate Members are eligible to be elected to leadership positions.

Please be assured that your response is confidential and will not be published in any electronic or print forum.

<table>
<thead>
<tr>
<th>2016 Nominating Committee Members</th>
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<tr>
<td>Chair:  Paul Feigin, Israel</td>
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<tr>
<td>Natacha DePaola, USA</td>
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<tr>
<td>Simeon Simoff, Australia</td>
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<tr>
<td>Hans-Jürgen Hoyer (ex-officio non-voting)</td>
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www.gedcouncil.org

www.ifees.net
Members of the Emirates Engineering Deans Council, EEDC, joined more than 100 academics from Emirati universities in Abu Dhabi to participate in the Sustainable Campus Initiative workshop organized by the Environmental Agency—Abu Dhabi (EAD). The workshop was meant to interactively discuss sustainability on campuses and propose a nationwide guideline for embedding sustainability into university campuses in the United Arab Emirates.

The workshop identified 5 main areas to be addressed; (1) the scope of the sustainable campus initiative, (2) role and responsibility assignment, (3) how to embed sustainability in campus infrastructure, (4) how to engage the campus youth in promoting sustainability and, (5) integrating sustainability into curriculum. The activity culminated in proposing a final guideline for sustainable campus achievement.

It is worth mentioning that this was the second workshop in the series. Last year the EAD held the first workshop under the title “Mainstreaming sustainability into university campuses”, which was a great success as well.

Marquette University Partners with the Medical College of Wisconsin to Expand Biomedical Engineering Program

On March 18, 2016, the Board of Trustees for Marquette University and the Medical College of Wisconsin (MCW) approved the creation of a joint Department of Biomedical Engineering. A statement issued by the Dean of the Opus College of Engineering at Marquette University, Kristina Ropella, touched on the transformative impact this collaboration will have in the future of biomedical engineering education in the USA.

“This new department brings together the engineering expertise of Marquette and the innovative medical research, technology and clinical expertise of MCW to provide an inclusive education model for the next generation of engineers, scientists and physicians. We are confident that the department will become a top biomedical engineering destination for students and faculty from around the US, a regional epicenter for translating biomedical research into solutions for patient care and a nationally recognized center for biomedical engineering innovation.”

Marquette University and MCW are launching a search for a permanent chair for the department, which officially launches on July 1, 2016. More details about the new Department of Biomedical Engineering are available on the department’s website.
MEMBER BRIEFS

**Ge4 Celebrates 20 Years**
The Ge4 Network will be celebrating its 20th anniversary this May in Vienna, Austria. The network, which stands for *Global Education: Exchanges for Engineers and Entrepreneurs*, is a non-profit network of universities, offering engineering students an opportunity to study, research, or even do internships in another country. Visit [www.ge4.org](http://www.ge4.org) for more information.

**Global Entrepreneurship Challenge: Business Plan Competition**
The Ibero-American Science and Technology Education Consortium (ISTEC) and the Global Innovation Network for Entrepreneurship and Technology (GINET) have partnered with IFEES, the GEDC and SPEED to develop the Global Entrepreneurship Challenge (GEC).

Student teams will submit business plans, with finalists presenting to a distinguished panel of judges during WEEF&GEDC 2016 Seoul. The goal of the GEC is to make this competition an annual event at every WEEF conference.

This competition is spearheaded by Ramiro Jordan, Sul Kas-sicieh, Rohit Kandakatla, Peter Kilpatrick, Uriel Cukierman and Hans-Jürgen Hoyer. If you are interested in sponsoring the GEC, please contact Hans-Jürgen Hoyer.

**Harare Institute of Technology Graduate Wins National Engineering Competition in Zimbabwe**
Harare Institute of Technology’s graduate, Auxilliah Chiwanga, from the Department of Chemical and Process Systems Engineering was the winner the First Prize at the 2015 National Engineering Students Competition Awards, held at the Harare Institute of Technology. She scooped the Zimbabwe Institution of Engineers’ Shield for the Prize after her project, the “Design of a Plant to Produce Virgin Paper from Bagasse”, was voted the best by a panel of judges from the Zimbabwe Institution of Engineers.

Commenting on the award, the dean of the school of Engineering and Technology at the Harare Institute of Technology, Eng. Perkins Muredzi noted that the Global Engineering Deans Council (GEDC) was earmarking promoting such forums for effective engineering education in Africa and beyond.

**IUCEE Becomes Indo Universal Collaboration for Engineering Education**
During the ICTIIEE Conference this past January in Pune, India, IUCEE changed the name of their organization to the Indo Universal Collaboration for Engineering Education.

This update reflects an expansion of the organization’s vision to improve the quality and global relevance of engineering education and research in India and related benefits to US engineering educators, with focus on faculty development, curriculum development, as well as improved technologies & research.

To read the full brief from IUCEE, visit their [website](http://www.iuccee.org).

**CaFIN Inaugural Meeting to be Held at McMaster University this July**
A conversation between deans during GEDC 2015 Adelaide has evolved into the establishment of a collaborative research for carbon free innovation network. Deans and hand-picked experts in carbon free research will be meeting at McMaster University in July for the first CaFIN Conference, which hopes to set the foundation for this new collaborative research network.

This initiative will begin piloting in seven institutions around the world: McMaster University, University of Notre Dame, University of Illinois-Chicago, Seoul National University, Hong Kong University, National University of Singapore and University of Adelaide.

www.iuccee.org

www.fed council.org
INDUSTRY BRIEFS

Dassault Systèmes Ranks Second on Global 100 List

Receiving an overall score of 75.70%, Dassault Systèmes was ranked second on the Corporate Knights’ 2016 Global 100 List. Dassault Systèmes is one of the leading software companies headquartered in Europe and holds environmental responsibility as one of its core values.

Since 2005, Corporate Knights has created an index to measure companies on key performance indicators: energy productivity, carbon productivity, water productivity, waste productivity, innovation capacity, percentage tax paid, CEO to average worker pay, pension fund status, safety performance, employee turnover, leadership diversity and clean capitalism pay link.

Further reading: Dassault Systèmes is Highest Ranked Tech Company in Global 100 World’s Most Sustainable Corporations (TCT Magazine)

MathWorks and i2Learning Collaborate to Empower Teachers

This past year, MathWorks collaborated with i2 Learning in order to give teachers in the Boston [USA] area an opportunity to utilize STEM learning. The partnership allowed teachers to attend several training workshops on STEM curriculum development before practicing the program with middle school students.

i2 Learning is a nationally recognized organization that has worked with over sixty schools since 2013. Their main objectives include evolving education by challenging the way teachers teach, implementing more hands-on projects, and inspiring students to become interested in the engineering field.

Further reading on Empowering Partnerships (EdTech Digest).

Juniper Networks to Build and Deploy the Largest Internet Gateway Backbone in the Middle East

Below is an excerpt from a Press Release issued by Juniper Networks. To read the full press release, click here.

Juniper Networks, the industry leader in network innovation, announced that Saudi Telecom Company (STC), the largest telecommunications company by market capitalization, total revenue and number of employees in the Arab world, has for the first time in the region deployed Juniper Networks® PTX5000 Series Packet Transport Routers to expand its fixed and mobile Internet backbone.

The new backbone will enable STC to handle services and functions that can scale seamlessly in order to keep pace with growing customer demand. The expansion project is designed to provide ultra-high speed Internet access to 3G/4G and fixed subscribers in many locations throughout the Middle East.

Total Enhances its North Sea Presence with Laggan-Tormore

Total is currently undertaking an innovative new project in the United Kingdom known as Laggan-Tormore. For the first time, Total will be utilizing subsea-to-shore technology in the gas processing plant. This alternative method is much more advantageous in the Northern U.K. due to characteristically extreme weather conditions. By installing the products directly onto the seabed, it leaves nothing on the surface.

Not only does the project provide significant benefits to the United Kingdom, but it also aids Total in strategically strengthening its relationship with the U.K.

Further reading on Total’s Website.
**Recommendated Reading**

**Once Famous for Beer, Milwaukee Now Bets on Water**
Sarah Gardner explores how Milwaukee (USA) is becoming a top innovator of water technology. The Water Council, in collaboration with the University of Wisconsin Milwaukee’s School of Freshwater Sciences have established a Global Water Center that, which seeks to become a forefront of water tech in the coming years.

Read the article in *Marketplace*.

**The World’s Top Universities for Attracting Industry Funding**
The Times for Higher Education has compiled a list of the top 20 global universities based on “private sector investment per academic”. Several institutions on the list have Deans who are members of the GEDC.

See the full list on THE’s website.

**Advances in Engineering Education in the Middle East and North Africa**
Edited by Mahmoud Abulwahed, Mazen Hasna (Qatar University) and Jeffrey Froyd (Texas A&M University), this book explores the current state of engineering education throughout the MENA region, and delves into future development of programs. Focusing on learning & teaching, curriculum development, assessment and accreditation and challenges & sustainability, the authors analyze pedagogical innovations, models for transforming engineering education and methods for using technological innovations to enhance active learning. Several contributors include members from the IFEES and GEDC communities.

The book can be purchased on Amazon.

**What’s the Value of a Liberal Arts Education in our 21st Century Digital Economy?**
The relevancy of a traditional liberal arts education is the focus of Irving Wladawsky-Berger’s article for the Wall Street Journal. When comparing the “soft skills” of liberal arts students to the “hard skills” learned by students in STEM programs, there are many critics of the traditional liberal arts education.

Wladawsky-Berger examines points raised on both sides of the debate about hard skills and soft skills, proposing that balance is an important key in university education.

Read the article in the *Wall Street Journal*.

**Interview: MathWorks and the Maker Movement**
Electronic Design interviews Madhu Govindarajan, Partner Manager at MathWorks about the Maker Movement. The Movement focuses primarily on technological projects with an emphasis on sharing innovative and creative ideas with a larger community. MathWorks, the world's leading developer of technical computing software for engineers and scientists, has recently started to support the Maker movement in several countries around the world by offering courses on training and software.

Read the interview on *Electronic Design*.

**Beyond the Flipped Classroom, Engage Engineering Students and They Will Succeed**
The American Institutions, the National Academy of Engineering and the National Research Council, have promoted the importance of expanding the pedagogical approach to engineering education. In response, the University of Southern California (USC) has worked on improving the quality of their engineering students’ education beyond supplying technology to the classroom.

In this short article, USC professors Gisele Ragusa and James Moore highlight best practices that focus on four metacognitive strategies: rehearsal, elaboration, organization/application and representation.

Download the PDF of the article.
ASIBEI Partners with Organizations Throughout Latin America to Develop the Ibero-American Open Lecture in Technological Development and Innovation

Written by Miguel Angel Sosa
In the city of Ushuaia, Argentina, on November 26th, 2015, the members of ASIBEI, on behalf of their respective associations in engineering education and universities agreed to the formation of the Ibero-American Open Lecture in Technological Development and Innovation. This initiative pushes for the study and promotion of technological development and innovation in Ibero-America.

The Open Lecture is an academic space for discussion, reflection, collective construction of knowledge and teaching and research. It seeks to create and strengthen inter-university relations, inter-institutional and interpersonal integration, while promoting skills development and the implementation of catalyzing and promoting technological development activities and innovation in the Ibero-American region.

The Ibero-American Open Lecture in Technological Development and Innovation's mission is to study and promote technological development and innovation in the region, especially in the field of higher engineering education as a means of strengthening development and international positioning of ASIBEI, our university communities and educational institutions, and improving political and social conditions of Ibero-American countries in the global context.

This project is perfectly aligned with the provisions of the mission, vision, principles and strategic institutional planning of ASIBEI and each of the institutions contributes to their effective implementation. In addition, it strengthens and integrates in a reference group in this field of strategic nature in the region, especially in the field of engineering.

As agreed in the Strategic Plan ASIBEI, which conceives in one of its axes working towards the technological development and innovation in the region and partner institutions, in perfect harmony with the provisions of the Declaration of Valparaiso of ASIBEI, which proposes the development of competition to "contribute to the generation of technological developments and/or technological innovations" as a goal in engineering careers in Ibero-America.

Founded Members
Asociación de Facultades y Escuelas de Ingeniería, ANFEI, México
Asociación Ecuatoriana de Instituciones de Enseñanza de la Ingeniería, ASECEI, Ecuador
Consejo de Decanos de Facultades de Ingeniería, CONDEFI, Chile
Consejo Federal de Decanos de Ingeniería, CONFEDI, Argentina
Consejo Nacional de Facultades de Ingeniería del Perú, CONAFIP, Perú
Instituto Politécnico de Setúbal, Portugal
Instituto Superior de Ingeniería de Porto, Portugal
Latin American and Caribbean Consortium of Engineering Institution Universidad ORT, Uruguay

Miguel Angel Sosa serves on the IFEES and ASIBEI Executive Committees in addition to serving on the board of deans of the Latin American chapter of the GEDC (GEDC-LATAM). He is dean at the Universidad Tecnológica Nacional de Argentina (UTN) Facultad Regional Delta. Sosa is the Coordinator of the newly formed Ibero-American Open Lecture in Technological Development and Innovation.
Science & Technology Partnerships in Africa

This excerpt from an article in the African Technopolitan, reproduced with permission from the publisher. The African Technopolitan is a quarterly magazine published by the African Centre for Technology Studies (ACTS). The full January issue, including the full article is available here.

The establishment and sustainability of robust science, technology and innovation (STI) sectors correlates directly to a nation’s economic growth and prosperity. Indeed, industrialized countries with thriving STI sectors are the world’s richest. African countries recognize this correlation, and many are aiming to significantly boost their STI portfolios in an effort to bridge the development divide within a generation. With the right preparation and training, Africa’s youth bulge can be leveraged to achieve this ambitious goal. Increased investment in STI infrastructure, workforce development, and policy will accelerate economic growth on the continent, and yield relevant, timely and deployable solutions for African challenges. Partnerships across borders, sectors and disciplines will facilitate rapid development and deployment of STI solutions and approaches.

Academic Partnerships

The Pan African University, launched in 2011, is a network of four established African universities seeking to build STI capacity at postgraduate levels by offering masters and doctoral programs in Basic Sciences, Technology and Innovation (Kenya), Life and Earth Sciences (Nigeria), Social Sciences (Cameroon) and Water/Energy Sciences (Algeria). This AU program illustrates how a shared vision by African governments can lead to strategic utilization of resources for enhancement of STI capacity and capability at existing campuses.

The Inclusion of Women

Countries with greater gender parity are more prosperous, more peaceful, and enjoy greater political stability. Exclusion of women from the STI sector wastes precious talent and retards scientific advancement. The future of African economies depends on eliminating this wasteful practice. Providing equal opportunity to girls and women to enroll and succeed in STEM careers is not only morally right, but also the smart thing to do. Efforts are currently underway across the continent to boost the number of girls enrolled in STEM programs at primary, secondary and tertiary levels. However, the success of these initiatives depends on the availability of role models - professional women who are active in STI fields.

Prof. Clare N. Muhoro is an Associate Professor of Chemistry at Towson University. She graduated with a Ph.D. in Organometallic Chemistry from Yale University in 1999.

This an excerpt from an article in the African Technopolitan, reproduced with permission from the publisher. The African Technopolitan is a quarterly magazine published by the African Centre for Technology Studies (ACTS). The full January issue, including the full article is available here.

Written by Clare Muhoro, Ph.D. Photo from original article in the African Technopolitan Magazine

www.gedcouncil.org  www.ifees.net
A Benchmark for Curricula in Engineering Education: The Leonardic Oath

Abstract & Full Paper by Ralph Dreher

It is the main thesis of this paper, that engineering work means to create the technical requirements for a world without famine and epidemics but with open access to fresh water and information, to education for all and more equality and sustainable development – so engineering work should be oriented and pledged towards the following two guiding principles: (1) the "transfer competence" to realise a solution and (2) the "responsible competence" to be aware of the effect of this solution for the problem itself as well as for the social, ecological and economic environment.

That means, the core task of engineering work is to be realized as a dualistic function. This idea is not a new one, it is the basic rule to realize technical impact assessment. But the ethical component is a future-oriented one, concerning our worldwide situation. It is also a clear fact to note that engineers often work to renew or to create "over engineering" products only to have incentives which attract customers – an essential lubricant of the capitalism, which dominates political decisions.

Concerning engineering educators, this idea implies that Engineering Education has to amalgamate this dualism by (1) Designing and realizing curricula, which will enable to develop both, "transfer" and "responsible" competences on the basis of defining aims, learning outcomes and systematically structured and linked contents of the study-programmes, and (2) creating teaching and learning styles, which facilitate students in all their diversity to develop their qualification in transferring and designing.

Purpose or Goal

Future-oriented engineering curricula must mirror that dualistic function. Looking to this, it seems useful, that there is a common benchmark for the processes of curricula development, course-design and accreditation.

The main idea of this paper is, to create (looking to the "Oath of Hippocrates" in medicine) a "Leonardic Oath for engineers" as main goal for Engineering Education. Looking to the millennium goals of UNESCO, this idea follows the main requirement Engineering Education, that engineers must become more concretely support to focus their work by using the categories of "sustainability", "capacity building" and "society faced".

Approach

The main method, to set the "Leonardic Oath" as phrase, was using the hermeneutic to analyse the important documents for Engineering Education using the research question: "How must engineers work to come up to society-generated exceptions?".

"Important documents" in this case means to have look to curricula (in an international comparison), national documents for the aims of Engineering Education (also in an international comparison), documents of the European Union (special in the period of introducing the reform of Bologna) and documents with world-wide influence (like from UNESCO).

The second step was analysing publication from social science with the topic, why the work of engineers are not well estimated in society, why society become afraid about engineer-dominated developments and how the work of engineers influences our live positive or negative.

Putting these results together, it accrue the result as illustrated above by describing the "dualistic function": Engineering work is the key to solve the most problems of the world, but each solution will produce new real problems (in case of misreflection) or apparently problems (in case of misunderstanding in the society). The main of topic of all societies is, that engineers will produce well-reflected solutions and that they are able to communicate these solutions as "Best-case" in the social-politic context.

This result was the base to formulate the "Leonardic Oath" in its form (see next chapter). and after formulating the "Leonardic Oath" and with a look to traditional curricula, the paper will show a solution based on the methods of "Vocational Science", to adapt these curricula in an another system of academic courses without the effect to neglect the learning of basic knowledge.

Conclusions/Recommendations/Summary

In a first step, the paper will develop a new goal for Engineering Education by formulating the "Leonardic Oath" as new benchmark for curricula and course-concept in Engineering Education. To show, that the requirements behind the words of the "Leonardic Oath" are not only fine words and that it is possible to adapt curricula in the meaning of this benchmark. Therefore, the methods of Vocational Science for finding engineering-oriented tasks with educational claims.

The PDF of the full paper is available here.

Ralph Dreher is the IFEES representative for the Scientific Society of Engineering Education (IPW), where he has served as the Vice President since 2011. Presently, Dreher is a professor in the Department of Electricity and Computer Science at the University of Siegen in Germany. He is the founding director of the TVD Institute (Technical Vocational Didactics).
RECENT EVENTS

2015 Regional Conference on Engineering Education (IPW)

By Gudrun Kammasch

The Netherlands’s largest University for Applied Sciences, Fontys, and IPW, the Scientific Society for Engineering Education invited the engineering education community to Eindhoven, the capital of the Brainport Region. As an innovative high-tech region, Brainport is a substantial contributor to national industrial export and is responsible for a quarter of all private investment in R&D, generating 37 per cent of all patents registered in the Netherlands each year.

In the midst of this region, the 10th Regional Conference took place and focused on the central theme how to define a useful balance between application orientation and science orientation on all levels of technical education, from TVET to the different engineering levels. Additionally, answers on the central questions were discussed.

The above is an excerpt of the full summary, available here.

XIV International Conference on Engineering Education (COPEC)

COPEC held its 14th annual conference in Salvador, Brazil from February 28th through March 2nd, 2016. The conference saw the convergence of educators and leaders in engineering education under the topic of Providing Knowledge to grant the Quality of Information Tools: a Current Global Challenge. Conducted in English, Spanish and Portuguese, the conference allowed for a diverse representation in the global engineering education community.

IFEES Representative for COPEC, Claudio de Rocha Brito, served as the General Chair for INTERTECH2016 and Melany Ciampi was the Technical Program Chair. Furthermore, Uriel Cukierman served on the Advisory Committee with several IFEES members including IEEE, SEFI, IGIP and ASEE.

Sixth International Conference on Industrial Engineering & Operations Management

With support from IEEE, IFEES, Siemens, the AEEA and several other organizations, universities and corporate partners, IEOM successfully held its 6th annual conference in Kuala Lumpur, Malaysia from March 8th-10th, 2016. The conference focused on Achieving and Sustaining Operational Excellence.

The conference boasted submissions from 70 countries. As IEEE (Malaysia Section) sponsored IEOM 2016, the papers from this conference will be published in IEEE Xplore. Photos from the conference are available here.

Quanser & Wiley Publishing Sponsors GEDC Deans Dinner in San Francisco

On March 30th, deans from across the United States and the world gathered together for the annual GEDC Dinner. Dan Sayre of Wiley Publishing co-sponsored the dinner with Paul Gilbert of Quanser Consulting. The GEDC Dinner is held annually during the Engineering Deans Institute, which is organized by IFEES member, ASEE. The Dinner was held at First Crush restaurant and provided GEDC members an opportunity to convene for an evening of networking and opportunities for collaboration.
From January 8th through 12th, 2016, the College of Engineering Pune welcomed IFEES members and engineering educators and stakeholders from around India for ICTIEE 2016.

The conference commenced on January 9th with workshops led by industry. National Instruments held four workshops focusing on using their technology in engineering education. Quanser offered a session on Modern Mechatronics and Control Education, while MathWorks treated participants to workshops on Robotics on Lego Mindstorms NXT using Simulink and Video Processing on Raspberry Pi Using Simulink.

The second day centered on academic workshops, many facilitated by IFEES members including Khairiyah Mohd-Yusof, Jennifer DeBoer, Michael Auer and Danilo Sutin. IU-CEE offered several courses in parallel with the academic workshops as well as Best Practices sessions. The final two days were dedicated to Plenary Panel Sessions and paper presentations. More details of presenters and topics are available on the ICTIEE program.

ICTIEE will convene again in 2017 at three different locations around India: January 6-8 in Hyderabad (Vardhaman College of Engineering), 9-10 in Rajkot (RK University); and 11-12 in Jaipur (Manipal University). Visit the ICTIEE website for the latest updates on the 2017 conference.

HVP Mandal’s College of Engineering and Technology in Amravati hosted the ISTE Annual Conference from January 9th through the 11th. The Conference focused on Challenged & Opportunities in Technical Education in the Era of Sustainable Development.

Devendra Fadnavis, Chief Minister of the Maharashtra State, inaugurated the convention, which included a delegation of prestigious leaders throughout India. Pratapsinh K. Desai, President of ISTE, gave his presidential address during the inauguration ceremony. Desai is the ISTE representative for IFEES and the ISTE Indian Deans Chapter of the GEDC.

The first day focused on the expectations of state and society from engineering education and transitioned to the role and expectations of industry in shaping engineering education and included several ministers for education, cultural affairs and industry.

The two day event was filled with vibrant collaboration among the gathering of leaders, educators, stakeholders and industry representing diverse regions from around India and the world. Conference details available on the ISTE website.

In February, Qatar University hosted Uriel Cukierman and Hans-Jürgen Hoyer in Doha to present their bid as potential hosts for WEEF-GEDC 2018.

Dr. Sushma Kilkami, 2015 GEDC Airbus Diversity Award Finalist Renetta Garrison Tull, and former IFEES President, Luemy Morell pose during ICTIEE 2016 Pune. The photo was provided by Dr. Tull, who presented on her experience bringing diversity to engineering education. An overview of her experience and more photos are available on her blog, Renetta Garrison Tull—Living Life Online.
<table>
<thead>
<tr>
<th>Event</th>
<th>Details</th>
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<tr>
<td><strong>8th International Materials Education Symposium</strong></td>
<td>Granta Design, Cambridge, United Kingdom, April 7-8, 2016</td>
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<tr>
<td><strong>Engineers for a Sustainable World Annual Conference</strong></td>
<td>Engineers for a Sustainable World, Berkeley, USA, April 7-10, 2016</td>
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<td><strong>ABET Symposium and Workshops</strong></td>
<td>ABET, Fort Lauderdale &amp; Hollywood (Florida), USA, April 13-16, 2016</td>
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<td><strong>ASIIN International Quality Assurance Conference</strong></td>
<td>German Accreditation Agency Specialized in Accrediting Degree Programs in Engineering, Informatics, Natural Sciences &amp; Mathematics, Berlin, Germany, May 2-4, 2016</td>
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<td><strong>Asian Engineering Deans Summit</strong></td>
<td>Zhejiang University, Hangzhou, China, May 16-17, 2016</td>
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<td><strong>20 Years of Ge4: Jubilee Ge4 Conference 2016</strong></td>
<td>Ge4 Network, Vienna, Austria, May 5-7, 2016</td>
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<td><strong>2016 International Conference on Robotics &amp; Automation</strong></td>
<td>Institute of Electrical and Electronics Engineers, Stockholm, Sweden, May 16-21, 2016</td>
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<tr>
<td><strong>15th World Conference on Continuing Engineering Education</strong></td>
<td>International Association for Continuing Engineering Education, Porto, Portugal, May 17-20, 2016</td>
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<td><strong>IIE Annual Conference</strong></td>
<td>Institute of Industrial Engineers, Anaheim, United States of America, May 21-24, 2016</td>
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<tr>
<td><strong>CEEA/ACEG Annual Conference</strong></td>
<td>Canadian Engineering Education Association, Halifax, Canada, June 19-22, 2016</td>
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<tr>
<td><strong>IFÉES-GEDC Reception &amp; Dinner and Breakfast</strong></td>
<td>New Orleans, USA, June 26 &amp; 28, 2016</td>
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UPCOMING EVENTS

July & August 2016

2016 Australasian Association for Engineering Education Winter School (AAEE)
Sydney, Australia
July 11-15, 2016
Registration Closes: July 10, 2016

XIV Latin American and Caribbean Consortium of Engineering Institutions International Multi-Conference for Engineering, Education and Technology (LACCEI)
San José, Costa Rica
July 20-22, 2016
Student Papers Deadline: April 30, 2016

Association for Engineering Education of Russia (AEER)
International Conference on Engineering Education
Tomsk & Irkutsk, Russian Federation
July 2016

6th Regional Conference on Engineering Education
Kuala Lumpur, Malaysia
August 9-10, 2016
Full Paper Submission: May 15, 2016

September 2016

44th Annual Conference of the European Society for Engineering Education (SEFI)
Tampere, Finland
September 12-16, 2016
Full Paper Submission: May 15, 2016

African Engineering Education Association (AEEA) International Conference & African Engineering Deans Council Summit
Bloemfontein, South Africa
September 20-23, 2016

October 2016

Latin American-GEDC Annual Conference & Asociación Colombiana de Facultades de Ingeniería Internacional Conference on Engineering Education (ACOFI)
Cartagena, Colombia
October 3-7, 2016
Abstract & Presentation Deadline: May 10, 2016
Final Paper Submission: June 27, 2016

5th Edition of International Conference on Wireless Networks and Embedded Systems (IEEE & Chitkara University)
Patiala, India
October 16-17, 2016
Call for Paper Deadline: April 15, 2016

November 2016

19th Annual Colloquium on International Engineering Education (University of Rhode Island)
Newport, USA
November 3-4, 2016

WEEF-GEDC 2016 Seoul
Seoul, South Korea
November 6-10, 2016
Abstract Submission Deadline: May 2, 2016

7th International Conference on Appropriate Technology
Mosi Oa Tunya (Victoria Falls), Zimbabwe
November 23-26, 2016
Abstract Deadline: May 15, 2016

December 2016

27th Australian Association for Engineering Education Conference (AAEE)
Coffs Harbour, Australia
December 4-7, 2016
Abstract & Workshop Proposals: May 16, 2016
Full Paper Submissions: August 15, 2016

Global Education Leader Conference at South University of Science & Technology
Shenzhen, China
December 5-7, 2016

2nd Asian Materials Education Symposium (Granta Design)
Singapore
December 8-9, 2016
Talk Abstract Deadline: May 31, 2016