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WORLD FEDERATION OF ENGINEERING ORGANIZATIONS
FÉDÉRATION MONDIALE DES ORGANISATIONS D'INGÉNIEURS
Education Committee - Comité de l'éducation - لجنة التعليم

Minutes of the 48th meeting of the CEIE committee Monday October 20th, 2018 - 9:00-12:30

Welcome by Chair

Committee Chair Munim welcomed the Elected President of WFEO Dr. Gong KE and wished him success in the coming years in his term and asked him to support the Committee because it is the reason of existence of WFEO.

Also, he welcomed all the current, new members and observers to the 48th meeting of the Committee on Education In Engineering in London and encouraged all for contribution and support of the CEIE.

He informed the members that he will participate in the International Conference on Sustainable Infrastructure (ICSI) next year in Los Angeles on a panel about Education in the Middle East and the Medeteranian area.

Approval of the Agenda

The agenda was reviewed and approved.

Presentation of the Committee members and guests.

All committee members present introduced themselves. The members and observers are listed below:

	Name	<u>Email</u>	Status	Country	attend
1	Gong Ke	gongk@mankai.edu.cn	WFEO-IP	China	attended
2	Abdul Menhem Alameddine	education@mouhandess.net	Member	Lebanon	attended
3	JP Mohsen	jpm@louisville.edu	Member	USA	attended
4	Ammar Alhusaini	alhusaini@gmail.com	member	Kuwait	attended
5	Eduardo Vendrel Vidal	even@upv.es	Member	Spain	attended
6	Fatima Fernandes Sobral	transcenderte@outlook.com ; fatsofer@hotmail.com	Member	Brazil	didn't attend
7	John Li	chienchungli@Yhoo.com	Member	China	didn't attend
8	Katy Turff	kturff@engc.org.uk	Member	England	attended



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9	Michael Milligin	mmilligan@abet.org	Observer	USA ABET	attended
10	Pang Haishao	panghaishao@163.com	Member	China - CAST	attended
11	Peter Greenwood	petergreenwood0@icloud.com	Member	Australia	excused
12	Pratarp Singh	pratarp@entecfiji.com	Member	SPEA	didn't attend
13	santiago Urio	santiago.urio@gmail.com	Member	Spain	didn't attend
14	Suad Abdullah Al Kandari	eng.suadkse@gmail.com	Member	Kuwait	attended
15	Talal Alqahtani	n.arhb@yahoo.com eng4q8@gmail.com	Observer	Kuwait	attended
16	Wang Qinglin	wangql@cast.org.cn	Member	China - CAST	attended
17	Wlodzimierz Miszalski	wlodzimierz.miszalski@wat.edu.pl	Member	Poland	Excused Death in the family
18	Asma Abdullah Al Khal		Member	Kuwait	didn't attend
19	Yvette Pearson	y.e.pearson@rice.edu	visitor	USA	attended
20	Massimiliano Capezzali	massimiliano.capezzali@heig-vd.ch	Member	Switzerland	Excused sickness
21	Allian pratt	pratta@asme.org	Observer	USA	attended
22	Adel Al-Hadithi	arabengs@hotmail.com	Observer	FAE	attended
23	khalid Chihab	khaledchehab1@gmail.com	Observer	Lebanon	attended
24	ingrid farmer	ingrid.farmer@ice.org.uk	Observer	UK	Attended
25	Aung Kyaw Myat	dr.akmyat@gmail.com	Observer		Attended
26	Zaw Min Aung	zawminaung@gmail.com	Observer		Attended
27	Francois Lurean	francoislurean@gmail.com	Observer		Attended
28	David Lapp	David.lapp@engineerscanada.ca	Observer	Canada	Attended
29	Yury V. Gulyaev	gulyaev@eplive.ru	Observer	Russia	Attended



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30	Chady Ben Khalifa	bk.chady@gmail.com	Observer	Tunisia	Attended
31	Dawn Bonfield	d.bonfield@aston.ac.uk	Observer	UK	Attended
32	Charlie Than	charlietan@gmail.com	Observer	Myanmar	Attended
33	Tian Qing	tianqing@cast.org.cn	Observer	China	Attended
34	Aung Kyaw Myat	dr.akmyat@gmail.com	Observer	Myanmar	Attended
35	Zawmim Aung	zawminawng@gmail.com	Observer	Myanmar	Attended
36	Enzo Siviero	esiviro@esap.it	Observer	Italy	Attended
37	Sergey Drukarenko	User1866@gmail.com	Observer	Russia	Attended

The Committee Internal Organisation.

Munim stated that since the meeting in Rome, the committee was working on the the request of the Executive Committee to update the names of the Committee members and to coordinate or to look for a host for the committee in 2019. The CEIE secretary sent emails to all national and international members to ask for the list of their representatives. No response was received. We would like to see the WFEO secreteriat pushing for that since they may be taken more seriously than us.

Work in the Arab Countries and the Medeteranian area

The committee was active in the preparation of the Engineering Association of Mediterranean Countries (EAMC) conference in Beirut Lebanon. Munim was the Director of the Conference. Dr. J.P. Mohsen was invited as keynote speaker for the “Importance of Scientific Research and Development in the quality of engineering education” conference organized by The Engineering Association of Mediterranean Countries (EAMC), Federation of Arab Engineers (FAE) and The Federation of Lebanese Engineers (FLE) in Beirut City, Lebanon from September 7th to September 8th of 2018.

The declarations were read by Munim:

Declaration of

**The conference Importance of Scientific Research
and Development in the quality of engineering education
held at the order of engineers in Beirut on 7-8 September 2018**

- 1. It is mandatory to apply accreditation mechanism to all universities in-line with international standards.**
- 2. Develop studies that identify labor market requirements and enforce them**
- 3. Develop the competency assessment mechanism required for new graduates and apply them transparently**



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4. **Strengthening research activities and integrating them into engineering education curricula**
5. **Full cooperation and coordination between universities, researchers and students**
6. **Establish permanent training centers for practicing engineer to develop their skills**
7. **Develop a mechanism to benefit from the expertise engineering engineers in engineering education**

The committee participated in the FAE-CET in preparation for the evaluation forms and visits of universities in the Arab countries due to a decree by the Kuwait State on the quality of education of engineers who are working in the country.

Chair and Vice Chair presentations on the committee activities

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The CEIE is working towards having a host in 2019. We contacted the many countries of the members of the committee and we are on the right track.

Dr. J.P. Mohsen participated as one of the eighteen global engineering education experts during the **APICTIEE 2018** (Andhra Pradesh International Conference on Transformations in Engineering Education) at Amaravati, AP on the campus of SRM University in India. The Conference was held on July 14 through 17 and was co-organized by IUCEE, APSSDC (AP State Skill Development Corporation and SRM AP at Amravati). Also made a presentation on Peer Evaluation of Teaching and conducted a panel discussion in the **Second IUCEE Leadership Summit 2018**. 106 leaders of 40 IUCEE Consortium Institutions gathered for the Second IUCEE Leadership Summit from July 19-21, 2018, at Goa, India, to share their transformational stories with 18 global experts and 13 industry leaders.

We were planning for the 2019 meeting in Melbourne, Australia to have the 11th World Congress on Engineering Education as part of our work to have dedicated congresses on issues related to engineering education. Unfortunately, that could not happen due to the organizing committee program. I suggested that because there were comments from the members of the executive council suggesting that we should do it in other countries. Lebanon is committee host. As a matter of fact, I raised the issue in our meetings before, and no country wanted to host it due to financial problems.

A meeting was planned between the Executive Director of Federation of Arab Engineers – Committee on Education and Training Dr. Ammar Al Hussein and DR. Michael Milligan to work on an agreement to have MOU with ABET.

As for the 11th Congress on Engineering Education, we will work to have it in the coming years with the new host of CEIE committee.



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A workshop was conducted by Dr. JP Mohsen with the participation of Dr. Yvette Pearson on the UN SDG's for 45 minutes. All attendees participated in small group discussions to identify ways in which engineers and engineering educators can contribute to achieving the SDG's. Incoming president Gong Ke participated in the workshop, and we appreciated his presence and recommendations. The outcome of the workshop will be added to the final recommendations from our committee.

During the Workshop, the attendees divided into five groups and the following describes a summary of their discussions:

Group one focused on Goal 4 Quality Education

We must concentrate on the following actions --

- Providing Quality Online resources
- Tutoring such as the kind of Khan Academy
- Vetting / accrediting / QC for entire educational resources
- Encourage students to look for quality education
- Continuous Professional Development for educators
- 3 things to consider: Student ethics, Curriculum (Intro courses, ethics courses), Institute standards

Group two focused on Goal 10 Reduce Inequality

- No reduction, it should be elimination.
- Developing apps with social orientation
- Developing specific courses and specifically for the capstone
- Introducing service learning activities / Courses as teaching methodology
- IDENTITY WELL- Which competencies the program can be related to this SDG / Define learning outcome / Organize teaching activities by courses

Group three focused on Goal 12 Responsible Consumption and Communities

- Pillars of sustainability (exists as learning outcome) as embedded in learning outcomes so there is a basis as which to teach
- Sustainable development principles are taught but not linked to SDGs
- Responsible consumption and production requires consideration within teaching of design and engineering practice as well as soft skills. Students should be taught to consider whole product lifecycle including what happens outside local context (i.e. global impact)
- Many case studies available-disposal of waste, shipping abroad by recycling; design of coffee machines with non-recyclable pods; clothing from man-made by shedding into oceans; teaching young engineers and think about whole lifecycle

Group four consisted of representatives from Russia and they presented the following summary:

The effort of Engineering Community in Russia are considered by several engineering organizations.



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1. Union of Engineering and Scientific association (USEA) and its Russian part (RUSEA) – nongovernmental organization.
2. Academy of Sciences of Russia which is a governmental organization. These efforts are concerning all seventeen SDGs. From these the following can be pointed out:
3. Goal 2 and Goal 6 – Zero hunger – Russia is very large with very different regions. For each region optimal use of soil, water, natural resources are achieved. The aim is to have good food, not to spoil soil and achieve food security and noninvasive conservation of food products – finally be completely independent and self-sufficient country from the point of view of nutrition and even have export of agriculture products. Of course, this should also include water and sanitation – there currently is a state program for these activities, including hydrology of big rivers (Volga, Lena, Amur), the influence of hydro power stations of ecology corresponding regions, pollution prevention, conservation of fishing resources, use of rivers as a transport means without spoiling the ecology also very important question is about sanitation and processing of products of human activity (food remnants, industrial waste, plastic, glass and metal remnants) without touching rivers and clean water reservoirs like Lake Baikal – the biggest in the world!

Group five consisted of representatives from Myanmar and they presented the following summary :-

1. Actually we focused on Goal no. 4 since year 2000 in Myanmar.
2. Enacted the law by Union Parliament in 2013, forming of Myanmar Engineering Council can give the important task for Technical Universitate in Accreditation process.
3. Chairperson of EEAC, Myanmar Engineering Council also attending this congress.
4. As all you know that Myanmar (Burma) is on the track of democracy and Democratic transition took place smoothly in 2010.
5. The most important issues arise around those years is Peace Process in Myanmar. Negotiation between the Union Government and ethic groups started since 2011.
6. Peace talk is going on up to now even the government changed in 2015.
7. That is why our group convinced that SDG goal 16 becomes very important for developing countries like Myanmar, Cambodia, Laos, Vietnam and the Phillipines.
8. Therefore the engineering curriculum should include some subject like Humanities, Ethics, Cooperation and coordination among the different groups to support in achieving the progression of peace, justice, and strong Institutions at all levels.

3 presentations were done after the coffee break:

- There was a presentation by Dr. Enzo Siviero, Rettore Università Telematica eCampus titled: “**The Role Of On Line Teaching To Connect University and Professionals**”

A discussion about E-learning was raised and the common recommendation



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was that some more work should be done on that subject to be accepted internationally, specially the way the tests will be given.

Attached is the power point presentation.

- Following that there was another presentation by Dr. Michael Milligan, PhD, PE, CAE – Executive Director and CEO of ABET on: **“Global Collaboration on Engineering Education – Other Organizations and Activities “**

Attached is the power point presentation.

- The last one was by Dr. WANG Qinglin PhD, Professor, Deputy Director General, Department of International Affairs, China Association for Science and Technology(CAST), on **"The new demands of globalization and new technological revolution on the ability of engineers"**

Attached is the power point presentation.

IDEAS publication

It was decided that the theme of the issue # 20 will be:

“Engineering Education addressing the UN-SDG’s”

- The meeting was adjourned at 12:30 PM.