



## **Invited Paper - U.S. WFEO Engineering Activities**

### **Dr. J. P. Mohsen, University of Louisville**

Dr. Mohsen is Past President of the American Society for Engineering Education. He has served on the ASEE Board of Directors previously as Vice President for Member Affairs and Vice President for Professional Interest Council.

J. P. Mohsen is professor and chair of the Civil and Environmental Engineering Department at the University of Louisville where he has taught since 1981. He holds a Ph.D. in civil engineering from the University of Cincinnati. His area of research is non-destructive testing and evaluation of materials with a focus on concrete structures. He teaches courses and conducts research in the areas of design and construction of pavements. He is currently involved in conducting research in condition survey of bridge structures using remote sensing technology.

He has also been actively involved the American Society of Civil Engineers, serving on the Educational Activities and Continuing Education committees as well as the Technical Council for Computing and Information Technology. He is active in the Transportation Research Board serving on Properties of Concrete and Design of Pavements committees.

Dr. Mohsen was named Engineer of the Year in Education by the Kentucky Section of ASCE in 1999 and 2007. He received the University of Louisville Distinguished Service to the Profession Award in 1999 and 2009. He received the Distinguished Teaching Professor Award in 2003.

### **Michael Sanio, American Society of Civil Engineers (ASCE)**

Michael (Mike) Sanio is the American Society of Civil Engineers (ASCE) Director, Sustainability and International Alliances he is staff contact for the Committee on Sustainability and the liaison to World Federation of Engineering Organizations (WFEO), Pan American Association of Engineers (UPADI), American Association of Engineering Societies (AAES), United Nations Education, Scientific and Cultural Organization (UNESCO), and others. With over 20 years experience in engineering, Mike has a diverse background at local, national and international levels in the areas of environment and sustainable development. He has worked for the World Bank/Global Environment Facility where he was responsible for the development and leadership of the private sector strategy, the organization of international CEO forums and the initiation of innovative projects with the private sector, NGOs, development banks and governments. In addition to other positions, he has served as Executive Director to the World Engineering Partnership for Sustainable Development, Deputy to the President of WFEO-ComTech and as a consultant to the United National Environment Program, the United Nations Development Program. He was also the lead author for the World Summit on Sustainable Development Science and Technology Major Group discussion paper leading to the 2002 meeting in Johannesburg. Mike has a Bachelor's degree in mechanical engineering from Carleton University in Ottawa, Canada, a Master's degree in mechanical engineering from the University of Texas in Austin and received - Profesor Honorario al doctor from Universidad Ricardo Palma, Lima 2009. He is a member of the Engineers Forum for Sustainable Development, the Engineers International Roundtable, the American Society of Mechanical Engineers, and ASCE where he has been an active member of the Task Committee for Sustainable Development.

# U.S. WFEO Activities

## Introduction

The World Federation of Engineering Organizations (WFEO) was created in 1968 with the support of the United Nations Environmental, Scientific, and Cultural Organization (UNESCO).<sup>1</sup> Its objectives, stated in its Constitution, are to work with Members: to encourage the application of engineering and technological advancement to economic and social progress throughout the world; to advance engineering as an equal opportunity profession in the interest of all people; and to foster peace throughout the world.

WFEO represents multi-discipline engineering organizations in more than 70 countries with a combined membership of over 15 million engineers. Voting members include National Members, International Members, and Affiliated Members. A National Member is the national professional engineering organization, or the union/association of organizations within a country, that is considered most representative of technically competent engineers according to the national standards within that country. An International Member is a union/association of national professional engineering bodies organized on a multi-lateral basis, either according to a regional interest or other international basis and has proven itself capable of undertaking ongoing activities. An Affiliated Member is a professional engineering organization or organizations existing in a specified geographical area, considered the most representative of technically competent engineers according to the standards of that special geographical area.

In addition, there are Corresponding, Associate, and Technical categories of membership that have non-voting status. A Corresponding Member is a National professional engineering organization not able to participate fully as a national member, but wishes to participate by correspondence in the activities of the Federation. An Associate Member is an engineering organization, corporate body or individual, which registers as such for the purpose of supporting the Federation, and receiving regular information on its activities. A Technical Member is an international non-governmental professional organization devoted to activities in a particular area of engineering.

The governing body of the Federation is the General Assembly which meets every two years, elects the Officers and National Members, approves the annual dues structure, and establishes Standing Technical Committees (STCs) and other committees. The General Assembly consists of the representatives of Members in good standing, each having one vote; one-third of all voting Members constitute a quorum.

Between meetings of the General Assembly the activities of the Federation are directed by the Executive Council which meets annually, approves the budget, and may establish other groups as deemed necessary. The Executive Council consists of the following voting Members: the Officers - President, President-elect, Immediate Past President, two

Executive Vice Presidents, and Treasurer; eight elected National Members; all Vice Presidents (Chairs of STCs); and six International Members. Non-voting Members are the Deputy Treasurer, the Executive Director, and Chairs of other Committees. The President has a two-year term, non-renewable, and the Executive Vice Presidents and National Members, have four-year terms renewable for a second term. Treasurer and International Members have no term limits.

The routine business of the Federation is conducted by the Executive Board, supported by the Executive Director and staff. The Executive Board consists of the President, President-elect, Immediate Past President, two Executive Vice Presidents and Treasurer; and non-voting members: the Deputy Treasurer and the Executive Director who are appointed by the Executive Board. An Internal auditor is also appointed by the Executive Board.

The WFEO secretariat is located at UNESCO in Paris and the Executive Director is Mrs. Tahani Youssef. The current President is Adel Kharafi from Kuwait and the President Elect is Marwan Abdelhamid from Palestine. Past presidents include William (Bud) Carroll representing the U.S. from 1995-1999.

#### United States Representation

The US National Member is the American Association of Engineering Societies (AAES).<sup>2</sup> Consistent with the general objectives of AAES, its International Activities Committee (IntAC) oversees the policies of US activities in WFEO.<sup>3</sup> Within IntAC and with its own specific society membership, the WFEO Task Group coordinates the policies and activities of US participants in the WFEO governance positions, Standing Technical Committees, and working groups, and other activities and collects contributions from its society members to pay the annual dues for membership in WFEO (currently 20,000 Euros). Member societies of the IntAC WFEO Task Group (2012) include:

- American Institute of Mining Engineers – AIME
- American Institute of Chemical Engineers - AIChE
- American Society of Civil Engineers – ASCE
- American Society for Engineering Education – ASEE
- American Society of Mechanical Engineers – ASME
- American Nuclear Society – ANS
- Institute for Electrical, Electronic Engineers, USA – IEEE USA
- National Council of Examiners for Engineering and Surveyors – NCEES
- National Society of Professional Engineers – NSPE
- Society of Women Engineers – SWE

#### Meetings and Conferences

The WFEO General Assembly biannual meetings are typically scheduled in conjunction with significant international meetings organized by WFEO National Members. There is an Executive Council meeting just before each General Assembly and in each of the

intervening years. These meetings are usually in the fall. The Executive Board meets at least once a year, usually in the spring.

Every four years, WFEO sponsors a World Engineering Congress on themes of international significance. Recent meetings have been held in Hanover, Germany (2000); Shanghai (2004); Brasilia (2008); and Geneva (2011); WEC 2015 will be in Kyoto, hosted by Japan.

The Standing Technical Committees also sponsor conferences in their specialty areas, some every year and some in alternate years. Examples include the following conferences: *Engineering Response to Climate Change in Africa, Nigeria 2010*; *Education* (Sarawak 2009); *Disaster Mitigation* (Istanbul 2009); *Women in Engineering* (Tunis 2007); *Environment* (India 2007). A World Congress on Engineering Education (WCEE) organized by the WFEO Standing Committee will take place in Beirut, Lebanon October 24-25, 2013.<sup>4</sup>

### Standing WFEO Committees

WFEO currently operates with the following ten standing committees:

<b>Committee</b>	<b>Host Country</b>	<b>Chair</b>
Anti-Corruption (ACTC)	Zimbabwe	Kamel Ayadi
Capacity Building (CECB)	South Africa	Tom McKune
Communications (CIC)	China	Ke Gong
Technology (EIT)	India	R. P. Gupta
Education (EIE)	Lebanon	Menhem Alameddine
Energy	USA	Sam Grossman
Environment (CEE)	Canada	Darrel Danyluk
Risk Management (DRM)	Japan	Yumio Ishii
Women (WIE)	Kuwait	Bashayer Al Awwad
Young Engineers (YE/FL)	Kuwait	Zainab Lari

In addition, there are several operating committees appointed by the President. These include committees dealing with Budgets, Awards, Membership, By-Laws, etc. The awards developed by WFEO and associate Consolidated Contractors Company CCC are most prestigious with stipends of \$10,000. Dr. Bernard Amedei, a professor at the University of Colorado and the founder of Engineers Without Borders received this award in 2007 for his work with Engineers Without Borders.<sup>5</sup>

The opportunities for engineers through WFEO to be a contributing force in the world for peace, infrastructure development, environmental issues and the well being of human beings on this planet have no limits. No other profession has the knowledge, education, leadership, support from college students to experienced professionals, and the ability to create a greater positive effect on mankind.

## Benefits to ASEE

WFEO directly supports the ASEE vision and mission and provides ASEE and the U.S. engineering community the opportunity to advance the profession by speaking with one voice on behalf of millions of engineers around the world. Working through AAES and its sister engineering societies, ASEE has the opportunity to effectively influence its policy initiatives on a global scale with those that have convening power – UNESCO, the World Bank, the United Nations, and world governments.

WFEO provides an opportunity to ASEE members to collaborate and exchange information and ideas with their foreign colleagues through its committee structure. It sponsors conferences and workshops in which ASEE members can readily participate and benefit from.

## ASEE Member Involvement

ASEE members can become involved in WFEO through a broad range of activities, including membership on a WFEO Standing Committee; corresponding committee memberships are also possible. Members can participate in WFEO-sponsored conferences in some cases as part of the official U.S. delegation.

The committee of most interest to ASEE members is probably the Standing Committee on Engineering Education.<sup>6</sup> This committee publishes the IDEAS series; the 2011 edition dealt with quality assurance. A topic under discussion for the next edition of IDEAS is best practices in educating engineers for a sustainable world.

Another committee that may be of interest to ASEE members is the Capacity Building Committee.<sup>7</sup> ASEE members played a lead role in the establishment of this committee and the U.S. hosted the committee from its launch in 2004 until 2010.

Other committees should also be of interest and for more information on how you can get involved in U.S. WFEO activities contact [publicaffairs@asee.org](mailto:publicaffairs@asee.org)

## Summary

The World Federation of Engineering Organizations provides unique opportunities for U.S. engineers to contribute to their profession.

## References

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<sup>1</sup> About Us <http://www.wfeo.net/about/> Accessed May 16, 2013

<sup>2</sup> AAES <http://www.aaes.org/> Accessed May 16, 2013

<sup>3</sup> AAES IntAC Accessed May 16, 2013

<sup>4</sup> 9<sup>th</sup> World Congress on Engineering Education <http://www.wfeo-ceie.org/wcee.php> Accessed May 16, 2013

<sup>5</sup> EWB <http://www.ewb-usa.org/> Accessed May 16, 2013

<sup>6</sup> Standing Committee on Engineering Education <http://www.wfeo.net/education/> Accessed May 16, 2013

<sup>7</sup> WFEO Capacity Building Committee <http://www.wfeo.net/capacitybuilding/statement/> Accessed May 16, 2013