



**International Federation of  
Engineering Education Societies**



# SECRETARIAT 2018 REPORT

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November 2017 - October 2018



The IFEES Secretariat is hosted by Volgenau School of Engineering at George Mason University, where GEDC member Ken Ball serves as dean. We deeply value our partnership with George Mason, which provides IFEES and the GEDC office space, IT services and additional facilities to support the Secretariat staff. In return for their support, the Secretariat works closely with the Volgenau School of Engineering's dean, faculty, program managers and students to expand their global network.

**Hans Jürgen Hoyer**

IFEES Secretary General  
GEDC Executive Secretary

**Kayla Hellal**

International Communications & Web Manager

**Anna Grineva**

International Programs Assistant

**Deborah Donovan**

Financial Consultant

**Kristen Fledderjohn**

Project Consultant

**Gifford Cheung**

IT Consultant

**Peter Tase**

Consultant



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Our mission is to connect the world's engineering education societies to leverage our members' collective strengths to improve engineering education worldwide.

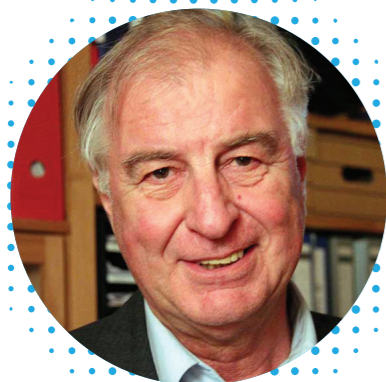
## About IFEES

Since its inauguration on October 9, 2006, in Rio de Janeiro (Brazil), the International Federation of Engineering Education Societies (IFEES) has continued to successfully increase membership, expand into new regions of the world and develop capacity building programs while connecting organizations, industry, special interest groups and other key stakeholders to a global engineering education community. The 2018 IFEES Secretariat report summarizes the internal and external activities of IFEES since November 2017. Individuals wishing to stay engaged and current with the latest information can access the most recent IFEES news and details about member activities at [IFEES.net](http://IFEES.net), through our quarterly GlobalEngineer: IFEES-GEDC Bulletin and by subscribing to the IFEES-GEDC mailing list. The next issue of the bulletin will be published in January 2019. You can also connect with us through Facebook, Twitter and LinkedIn.



# Executive Committee

Michael Auer (Austria) finishes his two-year term as IFEES President during the 2018 IFEES General Assembly on November 15, 2018, in Albuquerque, USA. He will serve for one year as IFEES Immediate Past President. IFEES President Elect, Ramiro Jordan (USA), begins his term as IFEES President on November 15, and will serve until the 2020 IFEES General Assembly. During the 2018 IFEES General Assembly, designated representatives from IFEES Member Organizations will elect six IFEES Executive Committee members, five of whom will serve on the Committee from 2018 until 2020. One candidate will complete Javier Cano's term, which concludes in 2019. The candidates for the 2018 IFEES Elections are: Mario Chauca (Peru, representing IIITEC), Sanket Dhadke (India, representing SCALE), Michael (Woonkyung) Kim (South Korea, representing KSEE), Elenore Lickl (Austria, representing IGIP), K. Manivannan (India, representing EPSI), Alfred Ngowi (South Africa, representing AEEA), Bernard Remaud (France, representing ENAEE), Ariela Sofer (USA, representing INCOSE) and You Zheng (China, representing, CSEE).



**Michael Auer**

President, 2016-2018

Immediate Past President, 2018-2019

Austria



**Ramiro Jordan**

President Elect, 2017-2018

President, 2018-2020

United States of America



**Tania Bueno**

First Vice President & Treasurer  
2017 - 2019  
Brazil



**Javier Cano**

Vice President for Student Affairs  
2017 - 2018  
Colombia



**Uriel Cukierman**

Vice President for Capacity Building  
2017 - 2019  
Argentina



**K. Manivannan**

Vice President for Industry &  
Academia Relations  
2016 - 2018  
India



**Khairiyah Mohd-Yusof**

Vice President for Diversity &  
Inclusion  
2016 - 2018  
Malaysia



**Paul Marca**

Executive Committee  
2018 - 2020  
United States of America



**Michael Milligan**

Executive Committee  
2016 - 2018  
United States of America



**Luis Manuel Sánchez Ruiz**

Executive Committee  
2017 - 2019  
Spain



**Christina White**

Executive Committee  
2016 - 2018  
United States of America



**Yao Zheng**

Executive Committee  
2016 - 2018  
China



**Natacha DePaola**

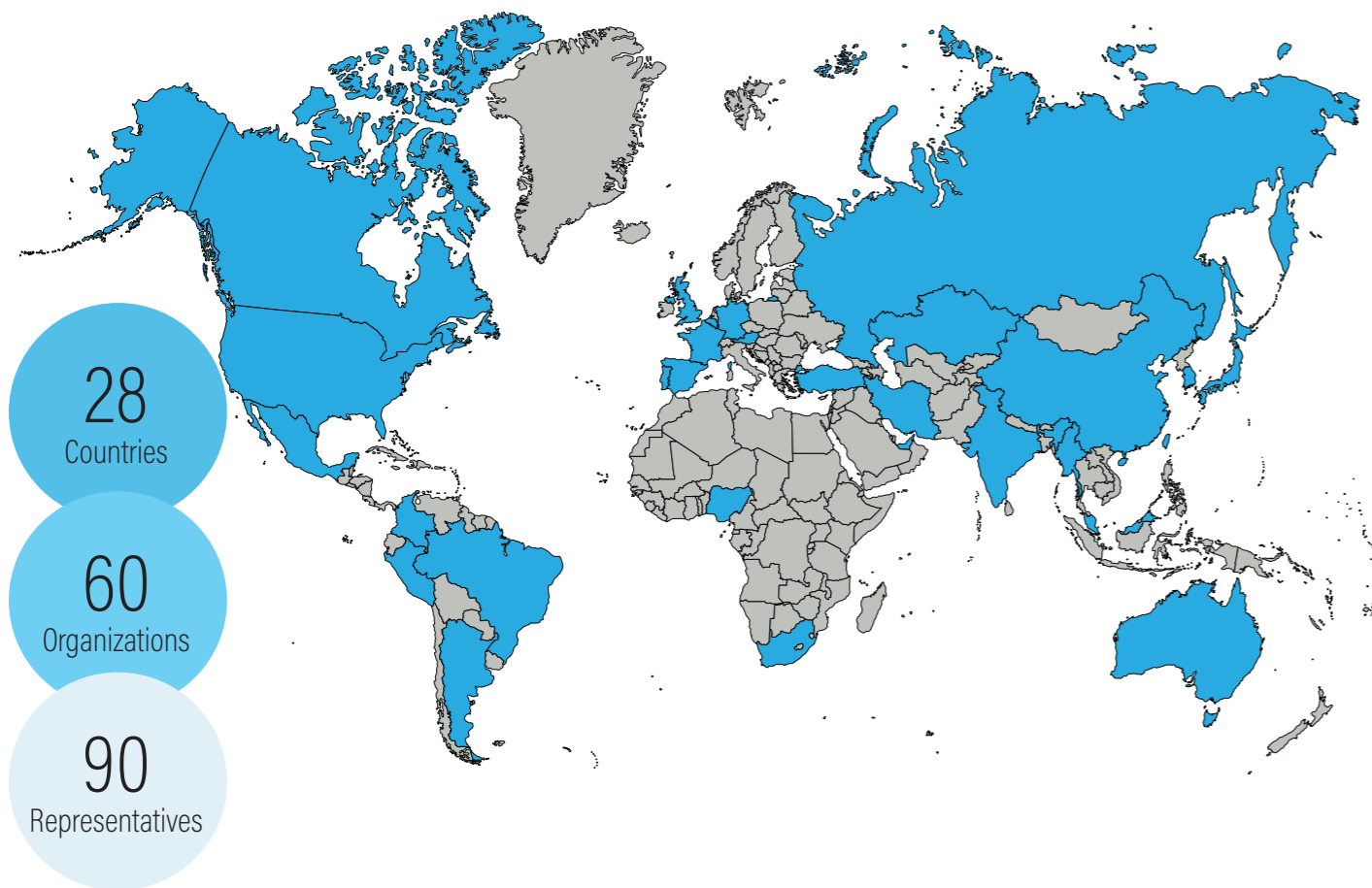
GEDC Chair (Ex Officio)  
2017 - 2019  
United States of America



**Hans Jürgen Hoyer**

Secretary General  
(Non-Voting)  
United States of America

# Membership Overview



## NEW PARTNERSHIPS

**WORLD FEDERATION OF ENGINEERING ORGANIZATIONS**  
*Memorandum of Understanding*



World Federation of Engineering Organizations  
Fédération Mondiale des Organisations d'Ingénieurs

IFEES, the GEDC and the World Federation of Engineering Organizations (WFEO) signed a Memorandum of Understanding in Paris on March 7, 2018. The WFEO's key strategic objective is to progress the United Nations Sustainable Development goals through engineering, and has partnered with IFEES given that engineering education is vital to achieving this objective. WFEO's membership includes professional engineering institutions from nearly 100 countries. The agreement enables both organizations to develop joint projects and events for the development of engineering education, facilitating joint activities devoted to promoting and supporting engineering education, especially in countries where there is a need to build capacity in this area. Furthermore, this partnership will enable discussion about the experience of engineering accreditation and the effectiveness of engineering education standards globally, especially in a rapidly changing technology environment.



IFEES President Michael Auer and WFEO President Marlene Kanga shake hands after signing the MoU.

**WORLD BANK**  
*Consultative Relationship*



**THE WORLD BANK**

# New Members

## CORPORATE

**EngineeringCAS by Liaison**  
*Representative: Ron Hyman*

EngineeringCAS™ is a full service, web-based application service that allows students to apply to multiple participating master's and doctorate programs with a single application and facilitates a streamlined admissions process for programs.



## GOLD

**Education Promotion Society for India**  
*Representative: N. Sambandam*

Formed by a group of senior educators, educational entrepreneurs, intellectuals, industry leaders and policy makers, EPSI has assumed a catalytic role in promoting the growth and quality of education in India. EPSI coordinates between government, institutional operators, academia, industry, students, employers and national and international bodies. EPSI is one of the hosts of WEEF 2019 Chennai.



## BRONZE

**Association of European Civil Engineering Faculties**  
*Representative: Alfredo Soeiro*



AECEF, with participation of civil engineering faculties from non-European countries, provides a means of cooperation and transfer of technologies among civil engineering faculties, their research workers, teachers and students, and among civil engineering specialists and institutions from different countries.

**Institution of Professional Engineers Myanmar**  
*Representatives: Myint Kyaw, Thwin Thu Lynn, Kyaw Naing*



IPEM promotes engineering education and career development of engineering educators in Myanmar. Its mission includes establishing registers of engineering educators, providing a link between engineering academic and practical site works, and providing continuing education and professional support to engineering educators in Myanmar.

## STUDENT

**Ikasle Socio-Educational Entity**  
*Representative: Azeez Mohideen Mohamed Nazeer*

ISEE's mission is to intellectually challenge students in intensive Critical Thinking (CT) based workshops, helping them to exhibit their investigative skills, foster their decision making abilities and thus assist to reorient their approach towards learning. ISEE conceptualizes and disseminates innovative techniques to improve CT of students, with a philosophy built on trans-disciplinary and student-centered learning, thus developing a strong network of creative, critical and responsible citizens.



**Phoenix Contact**

*Representatives: Thomas Guese and Klaus Hengsbach*

Phoenix Contact is a globally present, German-based market leader synonymous with future-oriented components, systems and solutions in the fields of electrical engineering, electronics and automation. Its network spans over 100 countries.



## SILVER

**EPICS**  
*Representative: Bill Oakes*

EPICS is a service learning design program in which teams of students partner with local and global community organizations to address human, community and environmental needs. EPICS was founded at Purdue University (USA) in 1995.



**International Council on Systems Engineers**  
*Representative: Ariela Sofer*



INCOSE is a membership organization founded to develop and disseminate the interdisciplinary principles and practices that enable the realization of successful systems. INCOSE is designed to connect systems engineering professionals with educational, networking and career-advancement opportunities.

**Iran Society of Engineering Education**  
*Representative: Ali Ashrafizadeh*



ISEE seeks to promote research in engineering education, collaborate with relevant research institutions and the executive branch for accreditation of engineering programs, and award prizes and scholarships to research collaborators. ISEE also provides educational, research and technical services to promote the engineering profession and promotes the publication of materials on engineering education.

**Student Consortium for Advancement & Learning in Engineering Education**  
*Representatives: Rajat Sharma, Sanket Dhadke*

In tandem with academia and industry, SCALE works to improve engineering education, empowering and fostering students as means of a positive change in local societies. Its pragmatic efforts are aimed at creating holistic value.





# Meetings & Events

## WEEF-GEDC 2018 ALBUQUERQUE

The annual World Engineering Education Forum (WEEF) will be held in conjunction with the Global Engineering Deans Council Conference (GEDC) from November 12-16, 2018, in Albuquerque, USA (WEEF-GEDC 2018 Albuquerque). This is the first time that the joint IFEES-GEDC event will be held in the United States of America.

WEEF-GEDC 2018 Albuquerque delves into peace engineering and how to transform engineers for a sustainable global future. Peace engineering envisions and works towards a world where prosperity, sustainability, social equity, entrepreneurship, transparency, community voice and engagement and a culture of quality thrive. Engineers have the power to play a vital role in delivering creative solutions that can radically transform and improve human and natural wellbeing. Today's engineers, educators and stakeholders need to ensure that future engineers embrace their roles as engineers of peace. These future engineers must be provided with the skills, understanding, capacity for reflection, sense of social responsibility and ethics, and resources to successfully navigate the socio-political impacts of their projects, engage in transdisciplinary developments and imagine, design and create a better world for us all.

During the event, the IFEES community will gather for the annual IFEES General Assembly, scheduled for Thursday, November 15, 2018. Candidates for the IFEES Executive Committee will provide brief presentations to the Assembly, who in turn will cast their votes to fill six seats on the IFEES Executive Committee. Members and friends of the community will also join together to honor 2018 IFEES Duncan Fraser Global Award Recipient Khairiyah Mohd-Yusof on the evening of November 15. IFEES will also host a roundtable with Executive Directors and Presidents from member organizations.

During WEEF-GEDC 2018, the GEDC will celebrate its 10th anniversary with a special panel reflecting on the past, present and future of the organization, followed by a celebratory reception Wednesday evening (November 15). During the event, the GEDC will also be conducting a series of special sessions developed for engineering deans, and members will gather for a GEDC General Assembly. The 2018 winner of the Airbus GEDC Diversity Award will also be announced during the conference.

The conference co-chairs are IFEES President Michael Auer, GEDC Chair Natacha DePaola, IFEES President Elect Ramiro Jordan, University of New Mexico Engineering Dean Christos Christodoulou and Hans Jürgen Hoyer. WEEF-GEDC 2018 is hosted in collaboration with the University of New Mexico School of Engineering and the Ibero-American Science & Technology Consortium.

## WEEF 2019 CHENNAI

The World Engineering Education Forum (WEEF) 2019 will be held in Chennai, India, from November 13-16, 2019. The Forum is being organized with the Education Promotion Society of India (EPSI), the Indo-Universal Collaboration for Engineering Education (IUCEE), the Vellore Institute of Technology (VIT) and the Student Consortium for Advancement & Learning in Engineering Education (SCALE).

The 2019 theme is Disruptive Engineering Education for Sustainable Development. The sub-themes focus on disruptions in student-centered learning, in the process of engineering education and in academia-industry interactions. Participants will also explore the sub-theme of socio-economic development through disruption.

EPSI will provide its expertise in facilitating: seminars; workshop and training programs in the education sector; promotional support; sharing past experiences from regional, national and international conferences and seminars. As a long-standing IFEES member, IUCEE will also bring its extensive conference and workshop organization expertise; ensure quality of the conference programming as it relates to engineering education; and activate its extensive network in India and around the world to draw in participants. VIT, with its commitment to educating students to international standard and to improving living standards through engineering, intends to implement an action plan generated through WEEF 2019 to improve the overall quality of engineering education in India. Furthermore, VIT will provide platforms for WEEF 2019 and foster effective industry-academia collaborations with aspirations for the development of an effective engineering ecosystem.



## IFEES-GEDC EVENTS DURING ASEE 2018

This past June in Salt Lake City (USA), IFEES and the GEDC hosted their annual reception and dinner during the American Society for Engineering Education's Annual Conference & Exposition.

IFEES President Michael Auer, IFEES President-Elect Ramiro Jordan and GEDC Chair Natacha DePaola highlighted the necessity of training engineers to foster peace and sustainability. They elaborated on the importance of the IFEES and GEDC communities in facilitating advances in engineering education and research around the globe.

Peter Martin (Quanser Consulting) and Ye Cheng (MathWorks) hosted the reception. This event, which has been facilitated by IFEES and the GEDC for many years, has given colleagues and friends from the global communities an opportunity to interact together and renew friendships in a warm and welcoming atmosphere.



## INTERNATIONAL CONFERENCE ON TRANSFORMATIONS IN ENGINEERING EDUCATION

Over five days in early January 2018, the Indo-Universal Collaboration for Engineering Education (IUCEE), represented in IFEES by Krishna Vedula and Stephanie Farrell, held its fifth International Conference on Transformations in Engineering Education (ICTIEE) in Greater Noida and Madurai, India. An IFEES-supported event, ICTIEE connects engineering educators from all over India with leaders from across the world as well as from industry. Participants share best practices and learn to transform their own institutional efforts to prepare engineering graduates who can address global challenges as well as targeted initiatives of the Indian government. ICTIEE 2018 was hosted in two different institutions to maximize impact among institutions all over India. On January 7 and 8, Malla Reddy Engineering College in Telangana will host the first half of ICTIEE 2019, which will be concluded in Rajpura, India, at Chitkara University on January 10 and 11.

IFEES also supported the Second IUCEE Leadership Summit, held in Goa during mid-July. The summit, whose theme was "transformations through collaboration and clusters of excellence," brought together leaders from IUCEE institutions to participate with facilitators and mentors, including industry and international academic experts.

## EVENTS AT TSINGHUA UNIVERSITY AND THE UNESCO INTERNATIONAL CENTER FOR ENGINEERING EDUCATION

Between July 13 and 14, IFEES and IUCEE offered its eighth series of capacity building workshops conducted in collaboration with the UNESCO International Center for Engineering Education (ICEE) and the Tsinghua Center for Engineering Education in Beijing, China. The workshops were held over two consecutive days in July and were facilitated by several global experts in engineering education. IFEES President Michael Auer and Qiao Weifeng from Tsinghua University organized the workshops, which addressed challenges of professional engineering education in training master students towards Industry 4.0 and Made in China 2025.

In October, Tsinghua University also hosted the UNESCO/ICEE Advisory Board of Directors, which includes several IFEES leaders. IFEES Executive Committee Member Luiz Manuel Sánchez Ruiz (SEFI), Funso Falade (AEEA), Lueny Morell (InnovaHiEd) and Hans Jürgen Hoyer were in attendance. The meeting preceded the International Research Symposium in Problem Based Learning organized by Tsinghua University, Aalborg University and UNESCO. In late September, Tsinghua also hosted an International Forum on Engineering Education and Industry Practice with Quanser (represented by Paul Gilbert).





# IFEES Supported Organizations



**GEDC**  
Global Engineering Deans Council

## Global Engineering Deans Council

Since 2008, the Global Engineering Deans Council (GEDC) has served as a catalytic force in the engagement of engineering deans and rectors from around the world. The GEDC's mission is to serve as a global network of engineering deans, and to leverage the collective strengths, for the advancement of engineering education and research. Its vision is to enhance the capabilities of engineering deans to transform schools in support of societies in a global economy. The GEDC has expanded its membership to include more than 300 deans, rectors and members of industry representing 37 countries. During GEDC 2017 Niagara Falls, Canada, Natacha DePaola assumed the role of GEDC Chair, a position she will maintain until GEDC 2019. Santiago Sirin Tekinay will assume the role of Chair Elect when Peter Kilpatrick finishes his one-year term as Immediate Past Chair during WEEF-GEDC 2018 Albuquerque. In 2018, the GEDC celebrates its 10<sup>th</sup> anniversary. The organization will mark the occasion with a special session during WEEF-GEDC 2018 Albuquerque, bringing together members, founders, corporate partners, and past and present leaders to discuss the past, present and future of the GEDC. The panel precedes a 10th Anniversary Reception celebrating this milestone and recognizing the contributions of key partners. The GEDC will also launch the GEDC Exchange, a mobility platform created in partnership with Quanser to further the GEDC's strategic goals.



**I I D E A**

## International Initiative for the Development of Engineering Academics

The International Initiative for Developing Engineering Academics (IIDEA) is IFEES' capacity building arm that offers onsite workshops and webinars. IIDEA focuses on establishing a global network of engineering faculty development programs to disseminate learning about the transformation of engineering education worldwide. The Initiative aims to provide all the engineering education associations, institutions and other engineering education stakeholders a clearinghouse of high caliber and world-class engineering faculty leadership training workshops/courses/seminars, helping to broker the offering of these around the world. In 2018, IIDEA continued its partnership with Tsinghua University to host another series of capacity building workshops in Beijing, China, facilitated by IFEES President Michael Auer. Preparations have already begun for 2019 workshops. IFEES and IIDEA are also in discussions with African partners and the World Bank to offer a series of capacity building workshops throughout Africa beginning in 2019.

Additionally, IFEES and IIDEA conducted webinars throughout 2018. Topics included ethics in engineering, peace engineering and industry/academia collaboration. All of the webinars are available to watch at [IFEES.net/Webinars](http://IFEES.net/Webinars). IFEES and IIDEA will host another series of webinars in 2019.



**SPEED**

## Student Platform for Engineering Education Development

The Student Platform for Engineering Education Development (SPEED) is a student-run organization that aims to impact the future development of engineering education and its effect on society and environment. Through engineering education initiatives and collaboration with academia, industry, society and government, SPEED is committed to improving the future of engineering education while embracing the considerable engineering challenges being faced in the 21st century.

Students from the University of New Mexico are organizing the annual Global Student Forum (GSF) with support from SPEED. The 14th GSF will be held during WEEF-GEDC 2018 Albuquerque and will consist of a four-day design camp competition divided into three tracks (industry, academia and entrepreneurship). Committees of specialists in each area will create a design question to get students to share their ideas and find pertinent solutions to problems faced by today's societies. This year's theme is "the voice of students in peace engineering: share, magnify and revolutionize."

In 2018, IFEES and SPEED launched the Young Scientist Award, accepting papers on engineering education and pedagogy from STEM students, academics and professionals under 30. The recipient, Ximena Vilamil, will be honored during the 2018 IFEES Awards Dinner.

# 2018 IFEES Duncan Fraser Award

**KHAIRIYAH MOHD-YUSOF**

In recognition of her work changing the landscape of engineering education around the world, IFEES will honor Khairiyah Mohd-Yusof with the 2018 IFEES Duncan Fraser Global Award for Excellence in Engineering Education. Dr. Mohd-Yusof has been a long-esteemed member of the IFEES community, representing the Society for Engineering Education of Malaysia (SEEM) in IFEES and serving as IFEES Vice President for Diversity & Inclusion. She also hosted WEEF 2017 Kuala Lumpur.

Dr. Mohd-Yusof is a Professor and the founding Director of the Universiti Teknologi Malaysia Centre for Engineering Education, which promotes scholarly and evidence-based practices in engineering education. She is also the President of SEEM. A practitioner and researcher of student-centered learning approaches, particularly Problem Based Learning, she has spoken at and conducted workshops around the world. Her research focuses on innovative teaching and learning practices, faculty development, curriculum design, talent pipeline and engineering education for sustainable development.

Dr. Mohd-Yusof developed and implemented the Cooperative Problem-Based Learning (CPBL) model, enhancing deep learning and promoting student development of team-based problem-solving skills, enabling them to attain 21st-century learning outcomes outlined by the World Economic Forum. She was an instrumental team member in the design and implementation of some of Asia's first Masters and Ph.D. programs in engineering education. She has facilitated training workshops throughout


Malaysia and abroad. The successful impact of her work is apparent at the national-level in Afghanistan, where she has spearheaded a project from the Afghanistan Ministry of Higher Education (funded by the World Bank) to modernize higher education by training and mentoring champions among faculty members in outcome-based education and student-centered learning since 2015.

She has also designed a series of training and mentoring programs for faculty, embracing student-centered techniques based on scholarly principles and research. In his nomination letter, Mitra Mohd Addi, Honorary Secretary of SEEM, writes that Dr. Mohd-Yusof is "one of the most prominent, acknowledged and inspiring engineering educators...within the global engineering network."

Dr. Mohd-Yusof will be honored in Albuquerque during the annual IFEES Duncan Fraser Awards dinner. As a recipient, she will receive US \$1,000 to support her work and a commemorative medal. Her airfare, accommodations and conference registration are also included. A special thank you to our 2018 Award sponsors: Dassault Systèmes, EngineeringCAS by Liaison, Granta Design and MathWorks.



 [h.hoyer.ifees@gedc.info](mailto:h.hoyer.ifees@gedc.info)  
 001 202 299 4942  
 [www.IFEES.net](http://www.IFEES.net)  
 [Facebook.com/IFEESocial](https://www.facebook.com/IFEESocial)  
 [Twitter.com/FEESTweets](https://twitter.com/FEESTweets)  
 [LinkedIn.com/Company/IFEES/](https://www.linkedin.com/company/IFEES/)

 IFEES-GEDC Secretariat (c/o Hans J Hoyer)  
Volgenau School of Engineering, George Mason University  
Nguyen Engineering Building, Suite 5100  
4400 University Drive, MS4A3  
Fairfax, VA 22030  
United States of America