

# SECRETARIAT REPORT



Leadership in Engineering Education

November 2021 - November 2022

IFEES.net

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# Overview

Since its inauguration in Rio de Janeiro (Brazil) on October 9, 2006, 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 2022 IFEES Secretariat report summarizes the internal and external activities of IFEES since November 2021. 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, through our GlobalEngineer: IFEES-GEDC Bulletin and by subscribing to the IFEES-GEDC mailing list. You can also connect with us through Facebook, Twitter and LinkedIn.

# COVID-19

As 2020 presented many challenges brought about by the global pandemic, the IFEES community persisted and came closer together than ever before furthering online initiatives from our Global Webinar Series in both English and Spanish, hosting our WEEF/GEDC Conference virtually, and launching our Peace Engineering/ECHO Collaborative.

We will continue evolve our mindsets and collectively identify new disciplines and new methods of learning for the future. This includes building new educational infrastructures that are dedicated to serving our Engineering Education community.

# Our Mission

IFEES connects the world's engineering education societies to leverage our members' collective strengths to improve engineering education worldwide.

### Governance

During the 2022 IFEES General Assembly, Stephanie Farrell will begin her Presidency and the designated representatives from IFEES member organizations elected below will begin their two-year-term in our IFEES Executive Committee.

#### 2022 Election Committee

Michael Auer (Chair), Austria Hans Jürgen Hoyer (ex-officio), United States

A special thank you to the Executive Committee members who completed their term in 2022: Ariela Sofer, Eleonore Lickl, and Felipe Gómez Gallo.

## 2022 Elections



María Laura Polo González Student Platform for Engineering Education Development (SPEED)



Australasian Association for Engineering Education(AAEE)



Luis Manuel Sánchez Ruiz

European Society for Engineering Education (SEFI)



Gloria Kim

Korean Society of Engineering

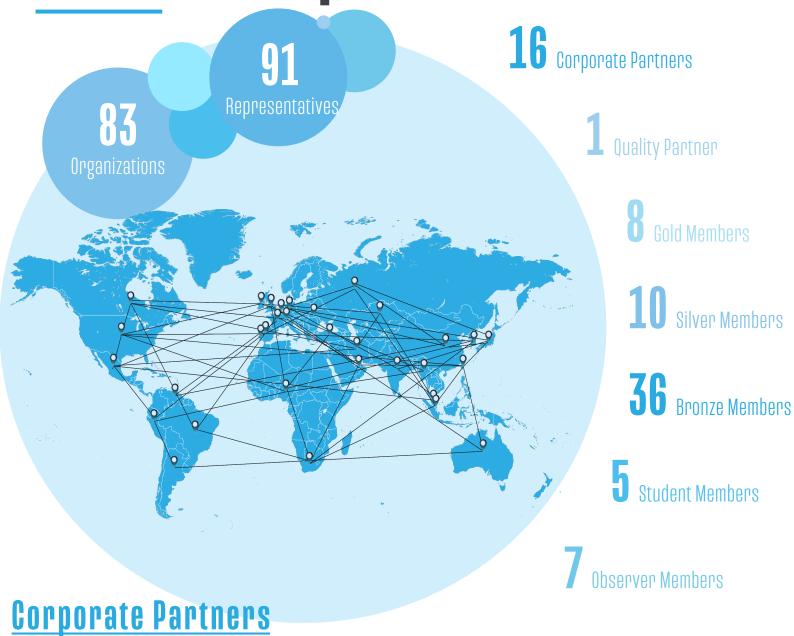
Education (KSEE)



Ramiro Jordan

Ibero-American Science and Technology Education Consortium (ISTEC)

# Membership Overview



































# **New Members**

#### <u>Corporate</u>



IN4OBE is a team of highly dedicated researchers, leaders, and educators committed to keep the flame of authentic Outcome Based Education burning throughout the world. IN4OBE is represented by Wajid Hussain.

Bentley Systems is a infrastructure engineering software company that provides innovative software to advance the world's infrastructure – sustaining both the global economy and environment. Bentley Systems is represented by Arun Kumar.



In 2021, IFEES welcomed a new category of membership. Academic Partners, which include academic departments, centers, divisions with specific focus on engineering education, or colleges which employ faculty members with demonstrated interest in engineering education and pedagogy.









The Royal Academy of Engineering provides progressive leadership for engineering and technology, and independent expert advice to government, in the UK and beyond. The Royal Academy is represented by Wahidulla Azizi.



### ANNUAL CONFERENCES

### WEEF-GEDC 2021 Hybrid Conference, Madrid Spain

The 2021 WEEF/GEDC was held in Madrid, Spain and online on November 15 to 18 in 2021. The theme was "Diversity and Ethics in Education for an Inclusive and Sustainable World" and with all the diverse attendees joining the conference in person and virtually, it was an incredible step in the direction of crafting such a world together. The Universidad Politécnica de Madrid and Universidad Nacional de Educación a Distancia were proud to host an integration of Academia, Industry, Social Institutions, Associations and Students.



Following a hybrid model, which utilized both face-to-face and online integration, enabled us to allow participants from all over the world to choose the way they wanted to join based on their level of accessibility and comfort.

We would like to express our profound gratitude to our conference sponsors: Siemens, Dassault Systèmes, Coursera, MathWorks, Quanser, ABET, Arçelik, CTI, UNESCO, and UC Davis, without whom, the conference would not have been possible. We would also like to thank our workshops sponsors: Altair, Infineon, and Labs Land, as well as our conference collaborators for their invaluable support during our hybrid conference.

### WEEF-GEDC 2022 Cape Town, South Africa

The 2022 World Engineering Education Forum partnering with the African Engineering Education Association (AEEA), is to be held from 28 November to 01 December 2022 at the Cape Town International Convention Centre (CTICC). The theme of the 2022 Conference is "Adapting to Global Disruption: Meeting the challenge with integrative, holistic, and sustainable engineering."



<u>Our IFEES-WEEF-GEDC 2023 will be held in Monterrey, Mexico in collaboration with Tecnológico de Monterrey</u>

### ADDITIONAL ACTIVITIES

#### Peace Engineering ECHO Initiative

Sudan University of Science and Technology (SUST), in partnership with Peace Engineering and Project ECHO, launched the first ECHO program for engineering, on Saturday, July 2 at 11 a.m. Central Africa Time.

The new ECHO program, called the Community Engineering Response Team (CERT), is a community of practice for senior engineering students to learn from experts in Peace Engineering to apply STEAM (Science, Technology, Engineering, Arts and Mathematics) principles, sustainable practices, cultural sensitivity, and innovation, to promote and support peace.











### **IFEES-GEDC Reception & Dinner**



On June 26, members **IFEES** friends of the and GEDC communities gathered in Minneapolis, Minnesota, for the annual IFEES-GEDC Reception and Dinner. This event, which has been held for several years during the ASEE Annual Conference and Exhibition, provides a warm and amicable atmosphere for old colleagues and new acquaintances and is an important opportunity to network and connect with colleagues and friends globally. Opening remarks were given by

IFEES Executive Committee Member, Soma Chakrabarti. The evening's sponsors also took a moment to speak, including Michale Auer from CTI, MathWorks' PJ Boardman, and Amirpasha Javid from Quanser. Remarks focused on the importance of the community's role in developing sustainable, peaceful engineering curricula and the importance of facilitating advances in engineering education and research globally.

### **ADDITIONAL ACTIVITIES**

#### **2023 IFEES EPOKA GEDC Regional Conference**

EPOKA University invites you to participate in the 2023 IFEES/GEDC/EPOKA international conference entitled "Challenges in the Western Balkans: Infrastructure and Development in the Region" to be held March 29th & 30th, 2023, in Tirana, Albania. This high-level international conference brings together academics, higher education administrators, industry leaders, government officials, nonprofit organizations, and other important stakeholders to discuss relevant substantive issues of importance within the global engineering community and beyond that impact contemporary society.

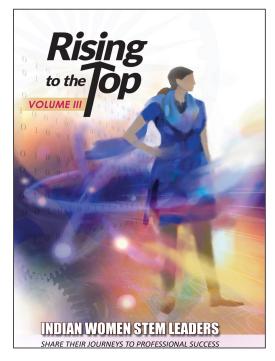
2023 IFEES/GEDC/EPOKA will attract 200 delegates from engineering and related disciplines. Participating delegates will include local and foreign companies, foundations and non-governmental organizations, university presidents and engineering deans, academics, researchers, and students from around the world. EPOKA University's conference partners are the Global Engineering Deans Council (GEDC) and the International Federation of Engineering Education Societies (IFEES). GEDC is a worldwide forum for engineering deans and rectors.

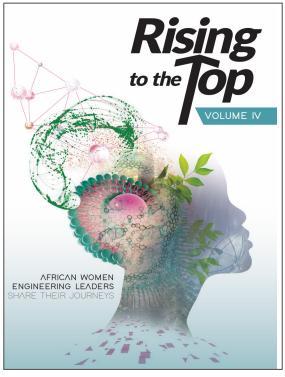


### RISING TO THE TOP

#### Volume III - India

Rising to the Top III has the honour to have representation from the crown of Kashmir to down south Bangalore, and from West Bengal to Odisha. Different cultural layering gave different twist to each one of their lives and they have yet managed to rise to the top. By openly sharing their personal journeys in these pages, the author hopes not only to inspire the next generation of engineering leaders, but also provide valuable insight into the challenges facing women engineers all across and the opportunities that are theirs for the taking.





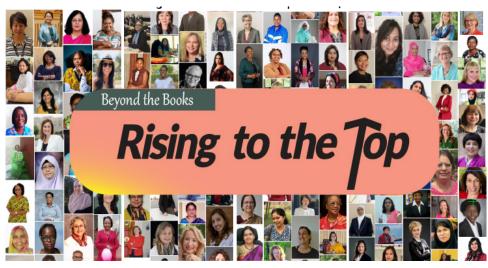
#### Volume IV - Africa

Rising to the Top IV provides an intimate, inspiring and thoughtprovoking look into the varied experiences that have shaped the lives and careers of women engineering leaders from across the diverse African continent. This is a region known for specific challenges that include the legacy of colonialism, civil and internecine warfare, famine and lack of access to basic services. Despite this, Africa is also a continent rich with creativity, innovation and a commitment to community upliftment. It is these rich and fascinating contrasts that you will experience by reading the journeys of leading female engineers based there. These stories are by no means technical, instead they are alive with insight and both engaging and entertaining, presented as interviews, memoirs and third-person biographies.

### The Journey Continues...

IFEES GEDC is in the process of publishing Volumes V and VI in 2023 focusing on the MENA/Arab region lead by Tagwa Musa and Southeast Asia regions lead by Khairiyah Mohd Yusof.

The Beyond the Books webinars creates an open, honest, and engaging space where engineers can learn about experiences from women around the world as they navigate and prosper in STEM fields.



### **IFEES AWARDS**

### 2022 Duncan Fraser Recipient

The 2022 Duncan Fraser Award Committee along with the IFEES Executive Committee is pleased to announce Pritpal Singh as the 2022 Award recipient.

Dr. Singh has revolutionized electrical and computer engineering (ECE) education by engaging ECE students and community members around the world in humanitarian engineering projects.









### **2022 IFEES Awardees**

In 2022, IFEES recognized exceptional leaders from our community and offered awards for their contributions to our global community.



Xavier Fouger
IFEES Corporate Award

For his leadership and support to IFEES since its inception, his service as one of the first vice presidents, and his steadfast efforts in support of employability of graduates and academia-industry relations.



Frank Huband

IFEES Leadership Award

For his key role in hosting IFEES at ASEE headquarters during its early years of formation, providing the necessary administrative and office support needed for the organization to grow, and helping incorporate IFEES as a not-for-profit organization in the US.



**Rachel Schroeder** 

IFEES Student Engagement Award

For her role in providing training opportunities to students globally, in sponsoring student attendance and engagement in WEEF, and in supporting diversity and inclusion in the engineering workplace.

### IFEES AWARDS



### **Quanser Global Sustainability Award**



2022 marked the first year of the Quanser Sustainability Award in partnership with IFEES and GEDC. This award encourages the development of initiatives that prepare students to discover and develop sustainable engineering methods throughout their careers.

- Paul Gilbert, (Canada), Co-Chair (non-voting), Quanser CEO
- Stephanie Farrell, (USA), Co-Chair, Professor & Founding Department Head, Rowan University
- Hans J. Hoyer (USA) (non-voting)
- Maria João Viamonte, (Portugal), President at Instituto Superior de Engenharia do Porto
- Elizabeth Croft, (Australia & Canada), Dean, Faculty of Engineering at Monash University
- Sushma Kulkarni, (India), Director at Rajarambapu Institute of Technology
- Soma Chakrabarti (United Kingdom), Ansys, IFEES
- Mario Chauca Saavedra (Peru), IFEES
- Sirin Tekinay (USA), GEDC
- Lelanie Smith (South Africa), University of Pretoria, IFEES

We are delighted to share an update on the Quanser Global Sustainability Award – a number of outstanding applications advanced to the second stage of the evaluation process and the Award Committee has now completed its review of those applications. Applications from the following universities have been successfully shortlisted with the winner announced in Cape Town, SA.







### WEBINARS

IFEES continues to offer capacity building webinars for engineering educators and stakeholders. Each webinar tackles cutting-edge and controversial topics in engineering and engineering pedagogy, facilitated by top rated professionals from academia and industry. With the experience of former IFEES president, Dr. Krishna Vedula, in organizing webinars through the Indo-Universal Collaboration for Engineering Education (IUCEE) organization, IFEES maintains its series of webinars both in English and Spanish and recently launched the Brent-Felder series that focuses on Effective Teaching and Learning. Webinars usually take place every other Wednesday and individuals or institutions interested in delivering a webinar are encouraged to contact us. All webinars are being recorded and can be found on the IFEES webpage.



#### **Brent-Felder Webinar Series: 2022-2024**





























Topics include addressing critical technical and social challenges facing engineering education; actively engaging students in person and online; using instructional technology effectively; designing inclusive pedagogy; and developing students' skills at metacognition, critical, creative, and multidisciplinary thinking, communication, and high-performance teamwork.



## IFEES SECRETARIAT



In January 2018, the IFEES-GEDC Secretariat transitioned to the Volgenau School of Engineering and Computing at George Mason University (GMU). GEDC Executive Committee member Ken Ball serves as Dean at GMU. Over the past four years, GMU has provided invaluable support to the IFEES-GEDC Secretariat and has allowed both organizations to grow through their gracious donation of office space, equipment, technical support, and other resources.

Located 32 kilometers (20 miles) outside of Washington D.C., this provides the IFEES-GEDC Secretariat strategic access to the large international representation in the region. Originally founded in 1949 as a branch of the University of Virginia, GMU became an independent institution in 1972. Apart from Fairfax, the institution has three other campuses throughout the state of Virginia and a fifth in Incheon, South Korea. GMU is a public institution with nearly 35,000 students, of whom more than 6,000 are enrolled in the university's engineering program. The Volgenau School of Engineering was founded in 1985 as the School of Information Technology and Engineering. Mason Engineering and Computing is one of the first schools to specialize in information security and assurance, was the first school in the USA to be recognized as a civilian center of excellence in this field and was the first to launch a bachelor's degree in Cyber Security Engineering. Mason Engineering is also recognized as a top-tier research university and is the largest public research university in Virginia.

Hans Jürgen Hoyer maintains his role as IFEES Secretary General and GEDC Executive Secretary. Aliki Pappas continues serving as the International Communications Manager and Deborah Donovan continues in her role as Financial Consultant and Peter Tase as Programs Consultant.

Please visit our website and let us know how it can be a better resource for you: ifees.net.