



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



WORLD FEDERATION OF ENGINEERING ORGANIZATIONS

YOUNG ENGINEERS / FUTURE LEADERS COMMITTEE (2019-2023)

ZOOM MEETING

FRIDAY OCT 16 2020, 12:00 – 2:00 PM CET



Firas Bou Diab

AGENDA



Welcome & Introduction

- Opening by Chair, Firas Bou Diab
- Introduction of Members
- Introduction of Guests
- Identification of any other business members wish to add to the agenda

WFEO Statement on the Covid-19 virus situation

Summary of 2019-2020 achievements

YE/FL during WEC 2019, Melbourne

The First World Engineering Day, March 4 2020

- 2020 Young Engineers Competition on SDG
- WED 2020 Mini-Series and YE/FL involvement

YE/FL Webinar Series “Engineering the Future”

- Webinar 1: Resilience and Sustainability for Young Engineers, July 22,2020
- Webinar 2: Climate Action, Oct 12,2020
- Upcoming Webinars

Involvement with other STCs / PICs

- 2020 UN/WFEO Call for Innovation - Youth Creativity for Sustainable Transport
- WFEO YE/FL participation in the 23rd China Beijing International High-Tech Expo
(with Committee on Engineering for Innovative Technologies)



AGENDA



Regional Updates

IESF - France

Milène Guermont

China Association for Science and Technology (CAST)

Zhang Wei

The Ghana Institution Of Engineering (GHIE)

Kwaku Duah

Hong Kong Institution of Engineers (HKIE)

Tak Tang

Federation of Myanmar Engineering Societies

Khin Maung Myint

Ethiopian Association of Civil Engineers (EACE)

Brook Legesse

Engineers Australia (EA)

Nicole Brown

Federation of Lebanese Engineers (FLE)

Firas Bou Diab



AGENDA



YE/FL Committee Next Year Plan

WED 2021

Forthcoming Collaboration with FIDIC Future Leaders

Collaboration with UN Major Group for Children and Youth (UNMGCY)

Draft MOU with European Young Engineers (EYE)

YE/FL Involvement in the World Engineering Education Forum and the Global Engineering Deans Council (WEEF/GEDC)

HLPF 2021 – Possibility of a side event

Working Group on SDG13 – Involvement with WFEO Committee on Engineering and the Environment CEE

International Strategic Forum Workshop - Stakeholder Collaboration for Global Integration of Youth in Industry



AGENDA



Contribution to WFEO website and
WFEO social media (Facebook,
Twitter, YouTube, LinkedIn)

Confirmation of the YE/FL
Committee members

Any Other Business

Closing Remarks and Adjournment

Next Meeting



Welcome & Introduction



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WFEO Statement on the Covid-19 virus situation



COVID-19 Information portal

COVID-19 Information portal

Engineers in media

WFEO members actions

AI and Big Data solutions

Medical response

Knowledge hub



- ✓ The COVID-19 pandemic has exposed inequalities and vulnerabilities across social, economic, and environmental spheres.
- ✓ Crucial role that engineers have to play
- ✓ Engineers are needed now more than ever
- ✓ WFEO stands beside you and encourages any initiative of solidarity between its members



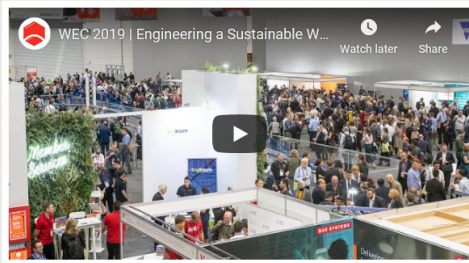
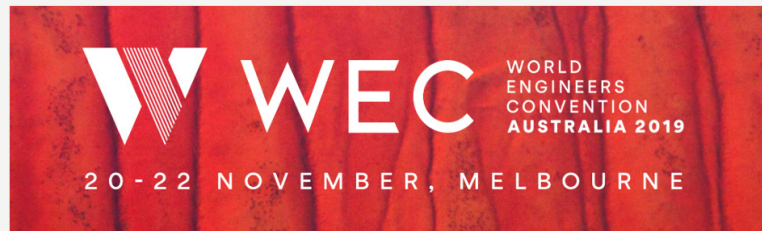
Summary of 2019-2020 achievements



YE/FL during WEC 2019, Melbourne



World Engineers Convention 2019 – WEC 2019



Engineers Australia and the World Federation of Engineering Organizations organized [World Engineers Convention \(WEC\) 2019](#) in Melbourne from 20 to 22 November 2019. Known as the "Olympics of Engineering", this international convention is held every four years and attracted 1300+ global participants from over 70 countries.

The overarching theme for WEC 2019 was "Engineering a Sustainable World: The Next 100 Years".



The First World Engineering Day, March 4 2020



On **April 19th, 2019**, the UNESCO Executive Board recommended unanimously to the UNESCO Member States to declare **March 4th** as World Engineering Day for Sustainable Development, and the proposal was approved unanimously on November 19th, 2019, at the 40th session of UNESCO General Conference.



<https://worldengineeringday.net/>



The First World Engineering Day, March 4 2020

World Engineering Day for Sustainable Development will be celebrated on 4th March every year as a UNESCO international day of celebration of engineers and engineering.

The 40th General Conference of UNESCO has adopted the resolution to proclaim 4th March of every year a World Engineering Day for Sustainable Development in November 2019.

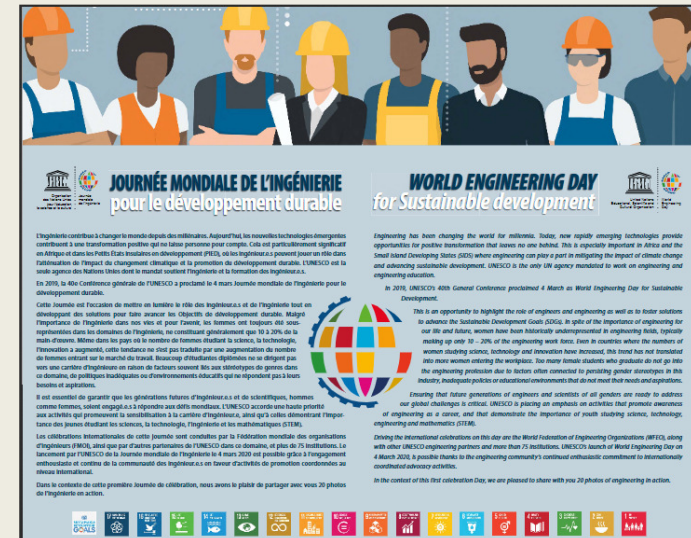
The World Federation of Engineering Organizations (WFEO) proposed 4th March as World Engineering Day, the founding day of the Federation, as part of the 50th anniversary celebrations of the Federation in 2018. This is an opportunity to celebrate the important contributions of engineers and engineering to sustainable development and modern life.

World Engineering Day for Sustainable Development will be celebrated annually from 2020 onwards. Organizations and offices of the United Nations system, and most importantly, governments, civil society, the public and private sectors, schools, universities, and more generally, citizens, are expected to make the international day a springboard for awareness-raising actions.

www.worldengineeringday.net



www.wfeo.org/publications/





The First World Engineering Day, March 4 2020

2020 Young Engineers Competition on SDG

2020 Awards

Celebrating the Achievements of Young Engineers Around the World



Young Engineers Competition on SDGs

World Federation of Engineering Organisations' Young Engineers/Future leaders Committee collaborated with IChemE (UK), FIDIC, Young Engineers Europe and students from Nankai University, to run a competition for early-career engineers from around the world. The goal of the competition was to highlight the work of young engineers and their engineering achievements in advancing the UN Sustainable Development Goals.

More than **400 young engineers** from more than **70 countries**, including some from the leading engineering universities of the world, showcased their projects to advance sustainable development through engineering.



Aida Rafat

Winner of Young Engineers Competition:

Ms. Aida Rafata, Imperial College London UK

SDG 12: Reducing textile waste and reducing pollution from textile dyeing technologies.

There are 16 Highly Commended Entries focused on different SDGs from around the world.



<https://www.wfeo.org/awards/>



The First World Engineering Day, March 4 2020

WED 2020 Mini-Series and YE/FL involvement

WED 2020 Mini-Series

Engineering Heroes, with the support of the World Federation of Engineering Organisations, launched 17 mini-episodes of Podcasts. Each episode was aimed at helping the audience understand how engineers are perfectly placed, and already working, within each of the United Nations Sustainable Development Goals. More than **4,000 audiences** from more than **70 countries** listened to Podcast Episodes, each rated in the top 20% to top 50% of podcasts worldwide. The report "WFE0 Podcast for WED 2020" is available [in this page](#).



www.wfeo.org/podcast-engineering-leaders-sdg-8-firas-bou-diab/



YE/FL Webinar Series “Engineering the Future”

To highlight the role of engineering design and systems-based approaches in risks identification, mitigation, and reduction, as well as recovery.

To highlight the key challenges for better engineering systems across multiple sectors and the role of new technologies and innovative engineering for resilience and sustainability

To Ensure a rapid recovery, while laying down the foundation for more resilient systems is a precondition to achieving the 2030 Agenda, including the Sustainable Development Goals.

To discuss how different levers – technology, finance, governance, collective action – can promote a shift towards more sustainable social, economic, and environmental systems.

In times of uncertainty, but with a clear compass towards social and environmental targets outlined in the **SDGs**, the systems that surround us need to better absorb future shocks and chart a transformative path to achieve a sustainable, inclusive future

YE/FL Webinar Series “Engineering the Future”



Webinar 1 (2020)

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

WFEO-YEFL

WEDNESDAY
JULY
22
4:00PM - 5:00PM
CET VIA ZOOM

ENGINEERING THE FUTURE

RESILIENCE AND SUSTAINABILITY FOR YOUNG ENGINEERS

MODERATOR:

Firas Bou Diab
Chair, Young Engineers / Future Leaders Committee - WFEO

SPEAKERS:

Prof. GONG Ke
President of WFEO

Matthew Baldwin
Deputy Director-General for Mobility and Transport, European Commission

Register <https://bit.ly/38ZJKlg>

2 AFFORDABLE AND CLEAN ENERGY
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
17 PARTNERSHIPS FOR THE GOALS

<https://youtu.be/na5yg7NZi2k>

Webinar 2 (2020)

MONDAY
12th OCTOBER
14:00-16:00
(CET)

Webinar Series “Engineering the Future”

—CLIMATE ACTION—

Speakers:

Dr. Marlene Kanga
Immediate Past President, WFEO

Davide Stronati
Chair of WFEO Committee on Engineering and the Environment

Bert D'Hooghe
Policy Director at the European Round Table for Industry (ERT)

Milda Pladaite
WFEO YE/FL member

Sara Nyberg
Junior Consultant Corporate Sustainability (at South Pole)
- YOUNGO (UNFCCC) Representative

Vane Aminga
Research Assistant, SIPRI

Firas Bou Diab
Chair of WFEO YE/FL Committee

13 CLIMATE ACTION

Register: <https://bit.ly/3nnQKPG>

<https://youtube.com/watch?v= SyfolzF5OA>



Involvement with other STCs / PICs

2020 UN/WFEO Call for Innovation - Youth Creativity for Sustainable Transport

Involvement with Committee on Engineering for Innovative Technologies



The United Nations Department of Economic and Social Affairs (UNDESA), in collaboration with WFEO, launched a call for innovations on January 7, 2020, inviting young innovators from around the globe to submit their creativity for sustainable transport.

With the newest innovation being submitted on March 21, the **2020 UN/WFEO Call for Innovation - Youth Creativity for Sustainable Transport** has received 7 submissions from 6 countries of Kenya, Lebanon, Malaysia, Zimbabwe, China, and Nigeria.

Submissions were reviewed by an expert team led by **Prof. Jianping Wu** (Director of Tsinghua-Cambridge-MIT Centre for Future Transport) as the chair, and **Firas Bou Diab** (Transport Expert - Chair of YE/FL) as the vice chair.

Given the current concerns regarding coronavirus disease (COVID-19), it has been decided that the Second United Nations Global Sustainable Transport Conference will be postponed. Accordingly, the deadline of this Call for Innovations will be extended, and the submission will remain open. Please stay tuned for future announcements.



Involvement with other STCs / PICs

WFEO YE/FL participation in the 23rd China Beijing International High-Tech Expo

A promotional poster for a webinar. The background is dark blue with gear and circuit patterns. At the top left, it says "FRIDAY 18TH SEPTEMBER 15:00-17:00 BEIJING TIME (GET+6)". The main title is "A Sustainable Future: Young Engineers and 4IR" with the subtitle "during the 23rd China Beijing High-Tech Expo". Logos for WFEO-CEIT and Young Engineers Future Leaders are at the top right. A "Moderator" section features a photo of Dr. PENG Jing and her title "Chair of WFEO Committee on Engineering for Innovative Technologies". A "Speakers" section lists four individuals: Prof. GONG Ke (President of World Federation of Engineering Organizations (WFEO)), Mr. Yohan Ramasundara (Member of AI and BD W.G., Immediate Past President, Australian Computer Society), Ms. Carol Cai (Product Owner of Digital Manufacturing in SAP), and Eng. Firas Bou Diab (Chair of WFEO Young Engineers / Future Leaders Committee).

FRIDAY
18TH SEPTEMBER
15:00-17:00
BEIJING TIME
(GET+6)

**A Sustainable Future:
Young Engineers and 4IR**
during the 23rd China Beijing High-Tech Expo

Moderator:
Dr. PENG Jing
Chair of WFEO Committee on
Engineering for Innovative
Technologies

Speakers:

- Prof. GONG Ke
President of World Federation
of Engineering Organizations
(WFEO)
- Mr. Yohan Ramasundara
Member of AI and BD W.G.,
Immediate Past President,
Australian Computer Society
- Ms. Carol Cai
Product Owner of Digital
Manufacturing in SAP
- Eng. Firas Bou Diab
Chair of WFEO Young Engineers
/ Future Leaders Committee

CEIT and ye/fl organized a webinar “A Sustainable Future: Young Engineers and the Fourth Industrial Revolution (4IR)” on the 18th September 2020, during the 23rd China Beijing International High-Tech Expo (CHITEC)

Webinar highlighted on the below:

- Technological Innovations done by Young Engineers to promote the SDGs
- Necessary knowledge and skills for young engineers in the context of 4IR and the SDGs
- COVID-19 impact: How are Young Engineers around the world are making a difference?



Regional Updates



IESF - France

Milène Guermont

China Association for Science and Technology (CAST)

Zhang Wei

The Ghana Institution Of Engineering (GHIE)

Kwaku Duah

Hong Kong Institution of Engineers (HKIE)

Tak Tang

Federation of Myanmar Engineering Societies

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Federation of Lebanese Engineers (FLE)

Firas Bou Diab



YE/FL Committee Next Year Plan



WED 2021



Engineering can be an appealing profession for young people, particularly when you focus on the work many engineers do to improve society and help others.

The range of possibilities within engineering is enormous, providing huge scope for people to make a difference every day.

YE/FL Activity for WED 2021

Draft Proposal - Getting Young Engineers enthusiastic about Engineering ??

- some ways to inspire the next generation of Engineers.
- deliver inspiring engineering experiences to young people, bringing them face-to-face (virtually) with role models within the industry.
- ?



YE/FL Webinar Series “Engineering the Future”



Upcoming Webinars

Young Engineers Volunteering for the Future

Synopsis

Engineers have a unique skill-set which can be valuable in a range of different areas. This session will share the experiences of young engineers who are committed to volunteering in their local communities and around the world to inspire the next generation and share their engineering expertise to make a difference.

Young Engineers = board members?

Synopsis

One of the challenges facing young engineers is having a “seat at the table” and understanding how organisations and companies operate. This discussion will provide young engineers insights and a starting point to understanding company structure, in particular the role of the board and how young engineers can get involved.



Collaboration with UN Major Group for Children and Youth (UNMGCY)

Youth Science–Policy Interface Platform: A global network of young people at the intersection of science (including engineering), technology, policy, & diplomacy



**UN Major Group for
Children and Youth**
the space for children and youth in the United Nations



Capacity Building

Capacity building for youth to effectively engage in science-policy and SETI, as it relates to the implementation, monitoring, and review of sustainable development frameworks

- Workshops at the Annual ST&I Forum for SDGs and High Level Political Forum
- Online community and resource sharing



Knowledge

Generate with and share knowledge from various formal, traditional, and non-formal SETI knowledge systems (e.g. science-policy publications)

- Collaboration with the Journal of Science Policy & Governance on a publication “implications of emerging technologies on sustainable development and inequalities
- Host webinars (e.g., HLPF), conduct surveys, engage members in consultations



Advancing the dialogues on issues related to 1) science for policy, 2) policy for science, ST&I as a ‘means of implementation’, and data

- Engage in various ST&I-related fora, dialogues (e.g., Digital Cooperation Summit at the UNGA, Expert Group Meeting on Digital Technologies, etc.)
- Develop position papers/statements

Youth actions leveraging SETI to support sustainable development efforts, in particular the Sustainable Development Goals, including through open science

- COVID-19 Youth Action Platform (examples of 250+ youth-led initiatives)
- SDG 7 (sustainable energy) Action Hub – portal of youth-led innovations

unmgcy.org
@UNMGCY
spiteam@unmgcy.org



Collaboration with UN Major Group for Children and Youth (UNMGCY)



Jointly organize capacity building activities for young engineers interested in sustainable development, in particular in the context of the implementation, follow-up, and review of the SDGs during the *Decade of Action (2020-2030)*

Collaborate on the development of knowledge products, for example contributing to policy briefs and soliciting papers for the annual UN MGCY Science-Policy Interface Publication, to inform discussions at various UN meetings

Co-design side events at various UN fora (e.g., Multi-Stakeholder Forum on Science, Technology & Innovation for SDGs, High Level Political Forum)
Share relevant WFEO (YE/FL) activities, events, and news on UN MGCY social media

Co-create thematic webinars in-line with meetings to be hosted in 2021 (e.g., World Food Systems Summit, High Level Dialogue on Energy, among others)

Highlight contributions from young engineers on the UN MGCY Youth Action Platform, specifically on COVID response/recovery efforts and SDGs implementation at global, regional, and (sub)-national levels



Future Collaboration with FIDIC Future Leaders



FIDIC Future Leaders is the group of young professionals of the International Federation of Consulting Engineers (FIDIC). As a leadership committee, the Future Leaders Committee (FLC) was formed to develop communication and networking opportunities for all FLs involved in the FIDIC community.



Future Leaders Management Certificate (FLMC)

The focus of this FIDIC programme is to strengthen the business expertise of young engineers and other professionals working in the field of consulting engineering. It also offers networking opportunities and an insight into FIDIC global activities



Draft MOU with European Young Engineers (EYE)



EYE represent the voice of 350,000 young engineers
Initiated discussions on Memorandum of Understanding or Collaboration
with

Objectives

- ✓ Extend WFEO and YE/FL visibility through EYE Network
 - ✓ Share knowledge
 - ✓ Collaborate on events for prompting SDGs
 - ✓ Contribute to Public Policy working groups



YE/FL Involvement in the World Engineering Education Forum and the Global Engineering Deans Council (WEEF/GEDC)



Young Engineers / Students Interface

Transformation and impact of learning technologies

Youth Mobilization to Action SDGs

This will give YE/FL an opportunity to share experiences, vision, strategy, and also network with engineering leaders from across the world



HLPF 2021 – Possibility of a side event



The High-level Political Forum, United Nations central platform for follow-up and review of the **2030 Agenda for Sustainable Development** and the Sustainable Development Goals, provides for the full and effective participation of all States Members of the United Nations and States members of specialized agencies.

**HLPF 2021 – Possibility of a side event
with United Nations Major Group for
Children and Youth ?**



Working Group on SDG13

Involvement with WFEO Committee on Engineering and the Environment (CEE)



Aim of WG

Establish the strategy, defining how Young Engineers can contribute to SDG 13 and WFEO Declaration on Climate Emergency 2019 (in particular section 3)

Objectives

- ✓ To collect and record best practices and challenges faced by Young engineers from Africa, Americas, ME , Asia / Pacific, Europe in climate action.
- ✓ Investigate the gaps and define the climate action strategy for young engineers.
- ✓ Assist WFEO UN with the analysis of the technical, economic and environmental feasibility of sustainable development proposals, and the implementation of Best Practices to achieve SDG 13

Expected Results

The role of WFEO Young Engineers in SDG 13 is defined and deployed. WFEO YE/FL Committee engage with young engineers representatives of all WFEO members and collaborate with external organizations, such as YOUNGO (UNFCCC)

In Collaboration with WFEO – CEE

Talk was initiated and further steps to be taken in a joint meeting by early November 2020



International Strategic Forum Workshop - Stakeholder Collaboration for Global Integration of Youth in Industry



- ❑ Open discussion between industry, government, universities, and Young Engineers
- ❑ Hearing directly from Young Engineers on the workforce development
- ❑ Facilitate communication among all stakeholders involved in the young engineer's development

- ❑ **Workforce Readiness** : digital literacy, resume writing, self-presentation, time management, professionalism, social norms.
- ❑ **Soft Skills**: communication, creative thinking, collaboration, adaptability, initiative, leadership, social emotional learning, teamwork, self-confidence, empathy, growth mindset, cultural awareness.
- ❑ **Technical Skills**: computer programming, coding, project management, financial management, mechanical functions, scientific tasks, technology-based skills,
- ❑ **Entrepreneurship**: setting up a business, starting freelance work or developing as a self-starter within a work environment



Contribution to WFEO website and WFEO social media (Facebook, Twitter, YouTube, LinkedIn)



Update regularly the Material posted on <http://www.wfeo.org/committee-young-engineers-future-leaders-members/> to reflect latest activities and work plan

Invite Engineers, Young Peers, and Colleagues to Like WFEO Facebook page and to follow WFEO Twitter, LinkedIn and YouTube accounts

Promote WFEO Website and Social Media pages through National Organizations and Platforms

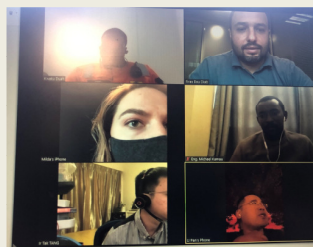
Share and retweet WFEO posts and interact with other similar pages & twitter account



Confirmation of the YE/FL Committee members



Improve communication among YE/FL Members (regular calls, emails, zoom meetings, etc...)



Invite all WFEO Members to nominate and confirm a member to YE/FL to increase membership of the Committee

Standard designation process for membership, by addressing designation to WFEO Executive Director Jacques de Méreuil (secretariat@wfeo.org), with the curriculum vitae

WFEO President call for designation in January & July 2020 with a target to designate young and talented Engineers



AOB /Closing Remarks / Next Meeting



Any Other Business ?

Closing Remarks

Next Meeting ?





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



THANK YOU

Firas Bou Diab