



# 6th AFRICA ENGINEERING WEEK (AEW) AND 4TH AFRICA ENGINEERING CONFERENCE

ORGANISED AND HOSTED BY

## THE ENGINEERING INSTITUTION OF ZAMBIA

IN COLLABORATION WITH

**THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL  
ORGANISATIONS (UNESCO) ,  
THE WORLD FEDERATION OF ENGINEERING ORGANISATIONS (WFEO),  
THE FEDERATION OF AFRICAN ENGINEERING ORGANISATIONS (FAEO)**

SUPPORTED BY

**SOUTHERN AFRICAN FEDERATION OF ENGINEERING ORGANISATIONS (SAFE0)**

**DATES:** 15<sup>th</sup> -21<sup>st</sup> September 2019

**VENUE:** AVANI Victoria Falls Resort, Livingstone - Zambia

Our Partner



Engineering Institution of Zambia



Twitter.com/TheEIZ



Engineering Council of South Africa



Victoria Falls one of the seven wonders of the world located in Livingstone - Zambia

## **THEME: Addressing the SDG's Through Sustainable Engineering Development.**

### **1. Introduction:**

The Engineering Institution of Zambia in collaboration with UNESCO, The World Federation of Engineering Organisations and The Federation of African Engineering Organisations will be hosting the 6th edition of the UNESCO-Africa Engineering Week and the 4th Africa Engineering Conference to be held in Livingstone between 15th to 21st September, 2019. The theme of the Conference is **“Addressing the SDG's Through Sustainable Engineering Development.”** The sub-themes therefore are aligned with the following specific SDG's:



**SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**



**SDG 5: Achieve gender equality and empower all women and girls**



**SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**



**SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable**



**SDG 13: Take urgent action to combat climate change and its impacts**

The Conference will run alongside the Engineering Week and will be held at the AVANI Victoria Falls Resort in the City of Livingstone from Tuesday 17th to Thursday 19th September 2019.

The event will feature comprehensive technical programmes and presentations with keynote speakers and a vibrant social programme. Among the activities to be held during the week will include but not limited to the following:

- a. Launch of the Engineering Week UNESCO by the Minister of Housing and Infrastructure Development.
- b. Capacity Building Workshop in Engineering Education delivered by ECSA

- and IEA.
- c. Women Engineering Forum
- d. Joint Career talk (Young Engineers and Future Leaders Forum) for secondary schools in and around Livingstone at AVANI Victoria Falls
- e. Skills competition –At LIBES in Livingstone
- f. Engineering EXPO at AVANI Victoria Falls Resort in Livingstone.
- g. Branch career talks in all EIZ Branches in Zambia
- h. Engineering Open days in Lusaka, Kitwe and Livingstone
- i. Social programs (Boat Cruise, Bungee Jumping, Game Drives etc.)
- j. Tour to Kazungula bridge
- k. Tour to Victoria Falls ZESCO Power station (ZESCO)

The UNESCO African Engineering week, shall be the 6<sup>th</sup> Continental Engineering week since 2014 and has been hosted by the following countries before;

South Africa	2014
Zimbabwe	2015
Nigeria	2016
Rwanda	2017
Kenya	2018

The Conference is expected to attract about 1,000 participants providing an excellent opportunity for exchanging of ideas to the engineering fraternity in Africa and beyond and the hosting Institution in particular. Due to the wide range of issues to be discussed, the conference is of interest to engineers, consultants, educational institutions, industrialists, manufacturers, economists, development specialists, policy makers, Government bodies, Students and society in general.

The Conference will attract Local and international delegates from the African continent and beyond. It will be organized globally with linkage of the WFEO and the FAEO, where engineers on the Globe will be linked to the conference through the Global Engineering organization (WFEO) and the continental Engineering organization (FAEO). This is one of the best opportunities for Engineers across the Globe coming together to share knowledge and experience while addressing high pressing engineering issues in Africa.

## 2. The theme of the Conference “Addressing the SDG's Through Sustainable Engineering Development.”

Sustainable Engineering Development is a highly applied discourse that can be used to learn to think rapidly and flexibly, acting decisively in the absence of complete information in order to improve quality of life through engineering solutions.

Addressing the sustainable development goals need concerted efforts from everybody and every professional. Nonetheless, engineering appears at the center of every foreseeable solution that Africa faces today.

Most of the world's construction is located in “developing countries, primarily in the Southern Hemisphere” (UNDP). These environments face challenges from extreme poverty and food shortages to manmade climate change and irreversible loss of biodiversity.

With this year's theme “sustainable engineering development” we aim to make you part of a new generation of practitioners who can address such challenges through practical engineering solutions, building resilience for local communities in the face of rapid urbanisation. Furthermore, we envisage that you will address the SDG's by applying sustainable solutions through the following sub-themes:

1. Demonstrating engineering relevance to society
2. Strategic engineering outreach
3. Strategies for responsive engineering curricula
4. Innovations with impact
5. Entrepreneurship in the engineering sector
6. Diversity and inclusiveness in engineering
7. Engineering in the Fourth Industrial Revolution (Industry 4.0).
8. Engineering practical skills transfer schemes
9. Engineering practice in the globalised environment (Harmonisation of Standards, ethics and quality assurance)

The main objective of this conference therefore, is to draw attention to the current diverse challenges that impede sustainable engineering development in Africa and to consider the prospects for adequate, reliable and sustainable development of this invaluable discourse. Informed persons and organizations in the discipline from all over the Globe will be brought together to interact, share experiences and ideas and brainstorm on how to strategically and pragmatically confront the problem of addressing the SDG's through sustainable engineering development and come up with feasible, economically viable and sustainable solutions.

For registration, submission of abstracts and any other information, kindly visit <http://aewconference.eiz.org.zm>

# 3. Call for Papers



## UNESCO 6th AFRICA ENGINEERING WEEK AND 4th AFRICA ENGINEERING CONFERENCE 15th - 21st September, 2019

### THEME: ADDRESSING THE SDGs THROUGH SUSTAINABLE ENGINEERING DEVELOPMENT

### CALL FOR PAPERS

The Engineering Institution of Zambia in collaboration with The Federation of African Engineering Organisations, The World Federation of Engineering Organisations and UNESCO are organising the 6<sup>th</sup> edition of the UNESCO-Africa Engineering Week and the 4<sup>th</sup> Africa Engineering Conference to be held in Livingstone from 15<sup>th</sup> to 21<sup>st</sup> September, 2019. The theme of the Conference is "Sustainable Engineering Development."

The Conference will run alongside the Engineering Week and will be held at the Avani Victoria Falls Resort in Zambia's tourist capital, the City of Livingstone, the home of one of the Seven Natural Wonders of the world, the Victoria Falls. Livingstone is served by direct international and local flights and therefore can be reached without necessarily connection through Lusaka, the Capital City of Zambia. However, it also has 60-minute connection flights and is 8 hours by road from Lusaka.

The event will feature comprehensive technical programmes and presentations with keynote speakers and a vibrant social programme.

The Organising Committee of the UNESCO 6<sup>th</sup> Africa Engineering Week and 4<sup>th</sup> Africa Engineering Conference now invites you to submit a 200-word abstract of your original paper on the under-listed sub-themes or closely related areas. Upon acceptance of your abstract, you will be invited to submit an extended abstract (6-page) version of your paper.

### THE SUB-THEMES FOR THE CONFERENCE ARE:

- |   |  |
|---|--|
| 1. Demonstrating engineering relevance to society   | 2. Strategic Engineering Outreach                |
| 3. Strategies for responsive engineering curricula  | 4. Innovations with impact                       |
| 5. Entrepreneurship in the engineering sector   | 6. Diversity and inclusiveness in engineering    |
| 7. Engineering in the Fourth Industrial Revolution (Industry 4.0)   | 8. Engineering practical skills transfer schemes |
| 9. Engineering practice in the globalised environment (Harmonisation of (Standards, ethics and quality assurance) |  |

### IMPORTANT DATES:

- Deadline for abstract reception: 10<sup>th</sup> July 2019
- Decision for acceptance/rejection: 13<sup>th</sup> July 2019
- Submission of final/full paper: 10<sup>th</sup> August 2019

### CONTINUING PROFESSIONAL DEVELOPMENT

Members of the Engineering Institution of Zambia will earn 25 CPD points for attending the Conference.

### CONFERENCE FEES

Category	Early Bird On or Before 20 <sup>th</sup> July 2019	After After 20 <sup>th</sup> July 2019
1 Members of FAEO	US\$400	US\$450
2 Non-members of FAEO	US\$450	US\$470
3 EIZ Members	ZMW5,000	ZMW5,700
4 Students	US\$100	US\$100

#### FURTHER INFORMATION:

For conference registration and payments, please click here.

Conference registration fees do not include accommodation, upkeep and transport. For indicative hotel rates in Livingstone, please click here.

For further information and submission of abstract, please email: [eiz@eiz.org.zm](mailto:eiz@eiz.org.zm); or [rex.kalanqu@eiz.org.zm](mailto:rex.kalanqu@eiz.org.zm) or visit our website: [www.eiz.org.zm](http://www.eiz.org.zm)

For Registration and submission of abstracts kindly visit this link (<http://aewconference.eiz.org.zm>)

## 4. WFEO FAEO Women in Engineering Forum



### **2nd Women in Engineering Forum (WIE) Tuesday, 17<sup>TH</sup> September 2019 AVANI Victoria Fall Resort**

There is a global effort to build and enhance the capacity of women generally in order to participate in the Social and Economic development of nations. However, greater effort is needed to enhance the participation of women in Engineering and Technology in various fora for Leadership and Technological advancement.

The need to empower Women in Engineering and Technology and encourage equal opportunities for professional development and achievement to the WFEO and the society at large led to WIE Committee been set up. This was to help increase the visibility and participation of women engineers within WFEO while also helping to boost their capability and leadership skills to achieve a high level of commitment, competency and responsibility towards the society.

#### **Vision**

To have women and men engineers, in equal opportunity, work to constructively resolve international and national issues, using the strength of their diversity and their differences for the benefit of humanity.

#### **Mission Statement**

To develop and confirm its position on the new social challenges of participation and leadership of professional women in a sustainable way, by offering support to enhance a concrete comprehension of the activities for our by WFEO member nations in order to integrate the gender dimension in their organizational activities and in the engineering profession in general, while helping in improving the representation of women engineers within WFEO's organizations in attracting and retaining young females interested in becoming engineering professionals worldwide.

During the Africa Engineering Week (AEW) WomEng will host a Women in Engineering Forum on Tuesday 17<sup>th</sup> September 2019 at the AVANI Victoria Falls Resort in Livingstone-Zambia. The theme for the forum is “**Leadership & Empowerment: SHIFT UP! OWN THE FUTURE**”

**The Sub themes are:**

1. Innovation
2. Diversity & inclusion: building Allies
3. Seize opportunities: think smart
  - 3.1. Self-employment
  - 3.2. Entrepreneurship
  - 3.3. UN, WE & SDGs
4. Celebrate women.

If you have a paper that addresses the above theme and accompanying sub themes, kindly submit your paper through the Engineering Institution of Zambia (EIZ) using the following email address :

[kabwe.julianna.musonda@gmail.com](mailto:kabwe.julianna.musonda@gmail.com) / [julianna.musonda@eiz.org.zm](mailto:julianna.musonda@eiz.org.zm) or  
FAEO women in engineering on [dooshivy@yahoo.com](mailto:dooshivy@yahoo.com)



Kazungula Bridge under construction



## 5. WFEO FAEO Capacity Building Workshop



**Friday, 20<sup>TH</sup> September 2019**  
**AVANI Victoria Fall Resort**

### **WFEO Workshop on Capacity building in Engineering Education**

The World Federation of Engineering Organizations (WFEO) is the peak body for engineering globally, representing nearly 100 professional engineering institutions and 30 million engineers. The International Engineering Alliance (IEA) is the governing body for the multilateral engineering accords and agreements relating to engineering education and professional development. WFEO and IEA will deliver a workshop on to develop capacity for professional engineering institutions and accreditation bodies in Africa. The goal of the workshop is to provide interested institutions with:

- Information on the requirements for accreditation of universities to international standards
- Information on the requirements for registration of engineering professionals on internationally recognised registers
- Support available to mentor and support interested institutions to achieve their national aspirations to enhance the standards of engineering education and professional development of engineers

This will be an interactive session which will include:

- Overview of the IEA systems and processes, the multilateral Accords and Agreements that provide mutual recognition of the engineering qualifications and professional credentials.
- Case studies from countries in Africa that have embarked on the journey for recognition of their education systems to international levels via the IEA Accords
- Case studies from countries in Africa and Asia on the journey to achieve international recognition or professional credentials via the IEA Agreements

The workshop will provide information on the processes and procedures for accreditation and recognition of engineering qualifications and registration of engineers to a recognised global standard and identify those institutions that would like to be supported to achieve these goals. The outcome will be the identification of participating institutions and projects that can be supported by WFEO and its member organisations.

## 6. UNESCO-Africa Engineering Week

The objective of UNESCO-Africa Engineering Week is to increase the visibility of engineering and its role in sustainable development and to encourage students to study engineering by supplementing STEM curriculum with practical engineering applications, and to incite more African countries to participate ensuring the sustainability of these efforts.

### UNESCO-Africa Engineering Week aims at –

- i. Bringing together the role players in engineering to discuss opportunities, challenges and solutions;
- ii. Educating the youth and the general public about engineering through outreach activities such as educational workshops, public awareness events, mentoring activities and university events;
- iii. Highlighting how engineers are key players in finding solutions to important global challenges, such as diseases and climate change;
- iv. Creating awareness about the importance of engineering and engineers in daily life.

## 7. Expected Participants

It is envisaged that the conference will attract about 1,000 local and international delegates from African Continent and beyond.

### Local Delegates:

- Members of the Engineering Institution of Zambia
- Universities
- Selected Secondary and Primary Schools in and around Livingstone
- Representatives of concerned Institutions (Public and Private)
- Partners and Sponsors

### International Delegates

- African government officials
- UNESCO, AU, CEOs and Directors
- Representatives of FAEO, WFEO and FAEO Regional branches
- Investors
- Sponsors

## 8. Benefits of the Africa Engineering Week and Conference

Benefits of the conference shall be diverse through presentations and discussions on addressing SDGS's through Sustainable Engineering Development in Africa. Outcomes shall be based on how sustainable engineering development can be applied and addressed correctly, through policies and practices. With consistent application sustainable engineering practices there shall be opportunities to reap a range of benefits. Those benefits include:

- a. Economic - Improving economic efficiency through the use of innovative sustainable solutions that could lead to efficient practices in the production and consumption of products and materials and this is has potential in creating new jobs and new business opportunities.
- b. Social - reducing adverse impacts on health and the environment by use of renewable resources, the resulting consequences are more appealing in that mortality rates would be increased as well as insuring that natural resources would not be depleted to the disadvantage of posterity.

As we commit to the SDGs, we commit to ensuring good health and well-being for all among other issues such as education, gender equality and sustainable engineering development.



AVANI Victoria Falls Resort Lawns

## 9. About the Venue



Located on Mosi-O-Tunya Road, Livingstone, the Avani Victoria Falls Resort is considered to be one of the best hotels in Livingstone and is just a 10-minute walk from the mighty Victoria Falls and the Zambezi River. The Avani Victoria Falls Resort boasts of an outdoor swimming pool, two restaurants and a garden.

Note: The ability to professionally host all meetings and break out groups in the one area, while staying in the same building, was the main criteria for selecting this hotel.

Harry Mwaanga Nkumbula International Airport is 15 minutes' drive away.

Phone: +260 (0)21 332 1122.

[www.suninternational.com/zambezi-sun](http://www.suninternational.com/zambezi-sun).



## 10. Harry Mwaanga Nkumbula International Airport



Harry Mwaanga Nkumbula International Airport

Harry Mwaanga Nkumbula International Airport (formerly Livingstone International Airport) brings you closer to the magnificent 'Smoke that Thunders' - The Victoria Falls Mosi-oa-tunya. A stone through away from one of the Seven Wonders of the World, Harry Mwaanga Nkumbula International Airport is the second oldest airport after Simon Mwansa Kapwepwe (Ndola) but stands out as the pride of the country due to its rehabilitated facilities.

With a new terminal building, runway, apron and apron lights, the airport is the focus of the Corporation. Livingstone International Airport is situated 5km from Livingstone town, the tourist capital, in the Southern Province and perhaps more significantly, 15 km from the Victoria Falls. The Airport was built in 1950 for a predominantly domestic market, but the airport infrastructure has been considerably up-graded through major redevelopment programmes undertaken by the Corporation.

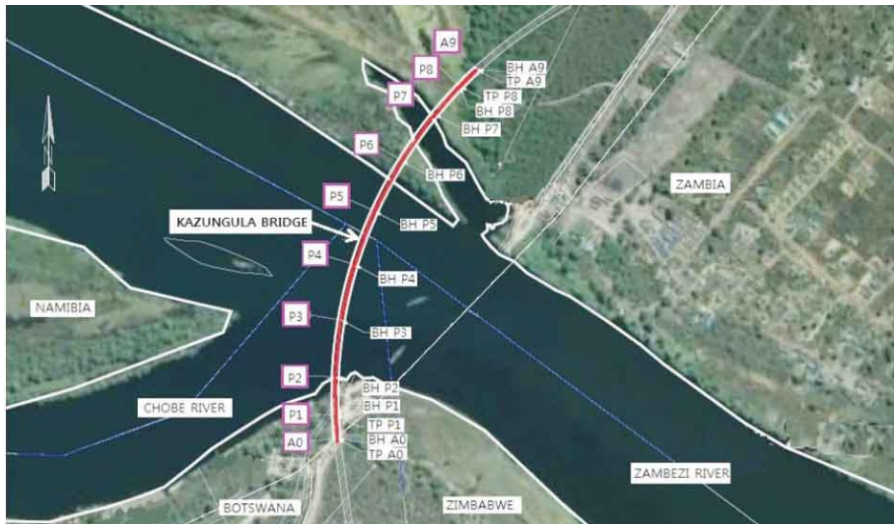


Victoria Falls Zesco Power Station

## 11. Africa Engineering Week (AEW) Program Framework

AFRICA ENGINEERING WEEK (AEW) Program Framework  
15<sup>th</sup> TO 21<sup>st</sup> SEPTEMBER 2019  
Mulungushi International Conference Center  
Lusaka

Date	Activity	Organisers	Parallel Programs
Sunday 15 <sup>th</sup> Sep 2019	Launch of the Engineering Week on Zambia National Broadcasting Corporation Television	-By the Minister of Infrastructure and National Development	EXPO at AVANI Skills Competition-LIBES
Monday 16 <sup>th</sup> Sep 2019	08:30 -13:00 Young Engineers and Future Leaders Forum 14:00 -17:00 Tour to Kazungula Bridge / Victoria Falls ZESCO Power Station 18:30- 21:00 Welcome Cocktail	-By WFEO, FAEO, SAFEO, EIZ -Organised by EIZ Secretariat  -Organised by EIZ Secretariat	EXPO at AVANI Skills Competition-LIBES
Tuesday 17 <sup>th</sup> Sep 2019	08:30 -13:00 Official opening of the AEW Conference 14:00 -17:00 Women in Engineering Conference	-By WFEO, FAEO, SAFEO, EIZ -By WFEO -Women in Engineering( WIE) and Zambia Women in Engineering(ZWES)	EXPO at AVANI Skills Competition-LIBES
Wednesday 18 <sup>th</sup> Sep 2019	08:30 -17:00 Technical Paper Presentations	Authors and Researchers	EXPO at AVANI Skills Competition-LIBES
Thursday 19 <sup>th</sup> Sep 2019	08:30 -17:00 Technical Paper Presentations	Authors and Researchers	EXPO at AVANI Skills Competition-LIBES
Friday 20 <sup>th</sup> Sep 2019	08:30 -17:00 Capacity Building Workshop 15:00 - 18:00 Boat Cruise 18:30 onwards Gala Dinner	Delivered by ECSA and IEA EIZ Secretariat EIZ Secretariat	Skills Competition-LIBES Deans Council Meeting
Saturday 21 <sup>st</sup> Sep 2019	08:30 -17:00 Conclusion of Skills Competition Activities at LIBES	EIZ	Skills Competition-LIBES



Aerial image of the Kazungula Bridge path

## 12. Finding your way



## 13. Hotel and Lodges Rates

S/ No	Place	Type	Rate	Email	Contact
1	Royal Livingstone (500m to the Venue)	Single Occupancy	\$285	<a href="mailto:rkatyoka@minor.com">rkatyoka@minor.com</a> <a href="mailto:tsimasiku@minor.com">tsimasiku@minor.com</a>	0977847243
2	AVANI Victoria Falls Resort (Venue)	Single Occupancy	\$138	<a href="mailto:rkatyoka@minor.com">rkatyoka@minor.com</a> <a href="mailto:tsimasiku@minor.com">tsimasiku@minor.com</a>	0977847243
3	David Livingstone (8.6Km to the Venue)	Single Room Twin/King Sharing Room	\$155 K176	<a href="mailto:lodge@dIslands spa.com">lodge@dIslands spa.com</a>	+260 21 332 4601 -9
4	Protea Hotel (7.5Km to the Venue)	Single Room Double Room	\$165 \$175	<a href="mailto:reservations@phlivingstone.co.zm">reservations@phlivingstone.co.zm</a> BOOKING CODE: PH15	0979492323
5	City Group Courtyard Hotel & Suites (7Km to the Venue)	Single Double Twin	\$100 \$120 \$160	<a href="mailto:res@thecourtyardhotels.com">res@thecourtyardhotels.com</a>	0978811205
6	Victoria Self Catering Apartments (7.5Km to the Venue)	1-2 Night 3 or more	\$115 ZMK \$102	<a href="mailto:Va.reservations@gmail.com">Va.reservations@gmail.com</a>	0973313644
7.	Chrismar Hotel (8Km to the Venue)	Std Single Std Double	\$184 \$230	<a href="mailto:booklvn@chrimarhotels.com">booklvn@chrimarhotels.com</a> <a href="mailto:gmlvn@chrimarhotels.com">gmlvn@chrimarhotels.com</a>	0213-323141
8	Kaazmein Lodge (12Km to the Venue)	Double/Twin	\$55	<a href="mailto:info@kaazmeinlodge.com">info@kaazmeinlodge.com</a> *All meal Halaal	0977322244
9.	Road Lodge (7.5Km to the Venue)	Double/Twin	\$83	<a href="mailto:info@kaazmeinlodge.com">info@kaazmeinlodge.com</a> *All meal Halaal	0977324646
10	Warm Habor (7.6Km to the Venue)	Executive Double Room Single Room	\$110 \$88 \$78	<a href="mailto:warmhaborhotel@gmail.com">warmhaborhotel@gmail.com</a>	0972381801



[www.eiz.org.zm](http://www.eiz.org.zm)



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