IEEE PES & IAS
PowerAfrica
Conference

IEEE PowerAfrica Conference 2020 |

Dates: **25th - 28th August 2020**

Venue: **Virtual**

TABLE OF CONTENTS

TABLE OF CONTENTS i
IEEE POWERAFRICA 2020 | VIRTUAL CONFERENCE INFORMATION II
CONFERENCE APP v
ABOUT IEEE POWERAFRICA CONFERENCE 1
WORD OF WELCOME BY THE CONFERENCE CHAIR 2
WORD OF WELCOME BY THE PS MINISTRY OF ENERGY 3
WHAT YOU WILL EXPERIENCE DURING THE POWERAFRICA CONFERENCE 2020 4
PAC20-Program at a glance Day 1 5
PAC20-Program at a glance Day 2 6
PAC20-Program at a glance Day 3 Part 1 7
PAC20-Program at a glance Day 3 Part 2 8
PAC20-Program at a glance Day 4 Part 1 9
PAC20-Program at a glance Day 4 Part 2 1 10
PowerAfrica SESSIONS Day 1 to 4 11
ORGANISING COMMITTEE 14
TUTORIAL SPEAKERS, ABSTRACT & BIO'S 16
AFRICA EXECUTIVE FORUM 22
PANELISTS 25
INDUSTRY SESSIONS BROUGHT TO YOU BY OMICRON 30
Panel YOUTHS PROVIDING HOPE TO POWER THE FUTURE OF AFRICA 36
WOMEN IN POWER 39
PANEL 3: ELECTRICAL SAFETY & STANDARDS PhD FORUM WORKSHOP 42
KEYNOTE SPEAKERS 44
TECHNICAL PROGRAM COMMITTEE 55
TPC MEMBERS 56
REVIEWERS 57
CLOSING REQUEST-FOR-PROPOSALS OF FUTURE 2022 & 2023 IEEE PES/IAS POWERAFRICA CONFERENCES 58
CLOSING REMARKS BY THE CONFERENCE GENERAL CHAIR 59

IEEE PowerAfrica 2020 | Virtual Conference Information

Virtual Conference Details:

- To access the Virtual Sessions, please click on the Session you wish to attend in the schedule on the full conference program here https://ieee-powerafrica.org/conference-program/

In order to access the Virtual Sessions, you must have a valid registration to PowerAfrica 2020.

- The virtual conference begins on Tuesday, 25 August 2020 at 6:00 AM GMT and concludes on Friday, 28 August 2020 at 14:30 GMT. The schedule of events, including the event type and access information, is included below.

  - Tutorials, PhD Forum, and Industry Sessions will be available at time shown, and on demand throughout the conference starting 2 hours after conclusion of event.
  - Everything else will be available only at the time shown, and on demand starting day after the conference.
  - All Live sessions will be held via ZOOM
  - Technical sessions Q&A will be done asynchronously via Group Chat and email.

Overview of Program	Tutorials	Industry Session / PhD Workshop	Technical Sessions	Panels / Plenaries	IEEE Smart Village (ISV)**
Event Type	Pre-recorded with Live Q&A	Pre-recorded with Live Q&A	Pre-recorded with Chat/Email Q&A	Pre-recorded with Live Q&A	Pre-recorded with Live Q&A
Start Time	06:00 GMT, 25 August	According to Program	According to Program	According to Program	According to Program
Time Zone	GMT	GMT	GMT	GMT	GMT
***On Demand Availability**					
Start Time	Begins as On Demand at 06:00 GMT on 25 August	Approximately 1-2 hours upon conclusion of live session	16:00 GMT on Friday, 28 August	16:00 GMT on Friday, 28 August	16:00 GMT on Friday, 28 August

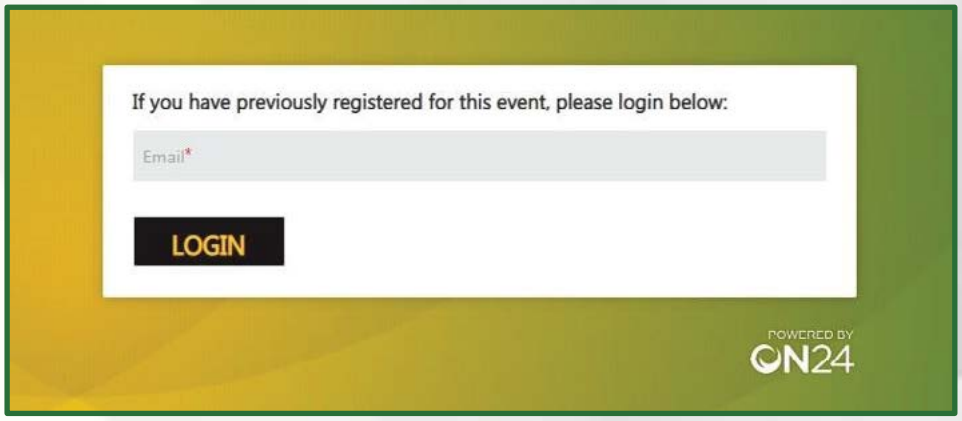
***On Demand** – a registrant will be able to view the session as a recorded event for a month after the conclusion of the event.

Help Desk Information:
Please direct any questions about access, or the Virtual Conference platform, to the IEEE MCE Digital Events team. Email John Teehan at j.teehan@ieee.org, Mark Pilkington at m.pilkington@ieee.org, and/or David Stankiewicz at d.stankiewicz@ieee.org.
Please direct any questions about Registration to powerafrica@ieeepesreg.com

For General conference inquiries, contact the PowerAfrica conference organizers, Humphrey Muhindi at hmuhindi@ieee.org and/or Avoki Omekanda at avoki.omekanda@ieee.org and/or info@ieee-powerafrica.org

Virtual Conference Sessions, Access, and Communications:

The following page contains the links to access each Virtual Session room for PowerAfrica 2020 https://ieee-powerafrica.org/conference-program. To enter a Session, simply click on the link and enter the Registration Email used for your Conference Registration (see example log in page below). **Please note that it must match the email address that you used for your conference registration or you will be unable to access the Session.**



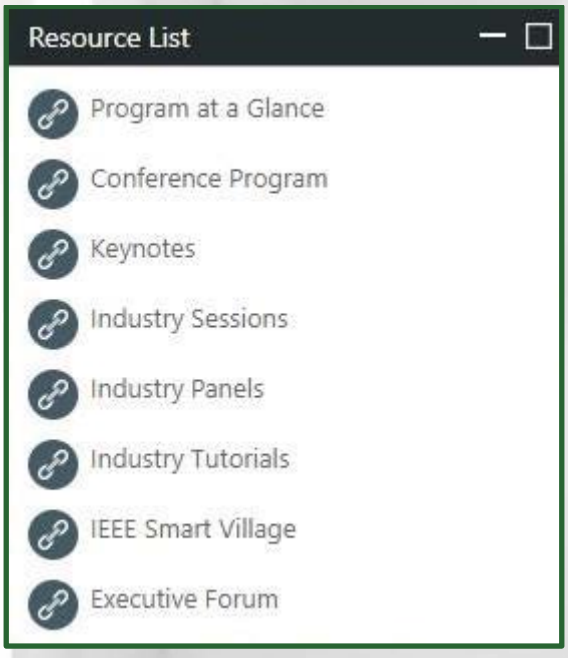
During your virtual conference experience, be sure to utilize the engagement widgets within the online platform. The online platform for PowerAfrica 2020 features two types of ways to communicate with speakers, session chairs, and other attendees.

1) The purple Q&A button allows you to submit questions directly to the presenters during on demand viewing. Please ensure you include the presentation title and presenter name in your question.

2) The blue Chat button is an interactive group chat. This will save all of your communications within the chat dialogue. Use this to have a direct conversation with whomever may be watching the videos at the same time as you, or to simply make a comment. If you are an author, presenter, or session chair in a specified session, please check this group chat every so often to be able to answer any questions asked of you.

Conference Resources:

Within each virtual session is a Resources window, which includes important program related information about the entire PowerAfrica 2020 virtual conference. Please check out the various links.



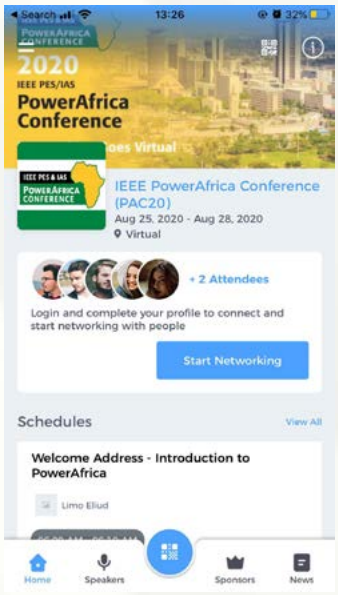
Virtual Conference Supported Browsers and OS:

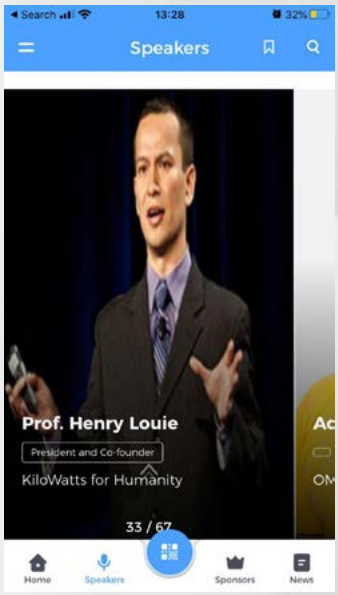
ON24 is compatible with the following

Supported Browsers for PC running Windows 7 or newer	Supported Browsers for Mac running Mac OS 10.10 or newer
· Google Chrome v58+ · Mozilla Firefox v53+ · Microsoft Edge Browser v38+ · Microsoft Internet Explorer 11*	· Google Chrome v56+ · Mozilla Firefox v53+ · Safari v10.1+

ON24 is mobile friendly and compatible with both iOS and Android.

CONFERENCE APP





Search for IEEE PowerAfrica Conference on your app store (iTunes or Android) and download the app today.

The PowerAfrica Conference app has the following functionalities:

- Detailed information about the event
- Schedule Your Event Agenda to Receive Personal Notifications on the Sessions
- Find a detailed list of Speakers, their Bios and Topics
- Find the list of Exhibitors with their details
- Check our List of Sponsors
- One on One Networking - Chat and Interact Directly with other Conference Delegates
- Find News Relevant to the Conference Participants, Power and Energy Sector as a whole.
- Receive Important Updates on the Proceedings through Social event feed
- Personalize Your Profiles and Promote Yourself and Your Company.
- Document Your Experience - Add and Save Your Own Private Notes, and Create a List of Personal Favorites.
- Accept "push notifications" to receive important announcements, emergency notifications, and reminders while you're at the conference.

For assistance with the mobile app, please email pac.support@ieee.org

ABOUT IEEE POWERAFRICA CONFERENCE

PowerAfrica 2020 is a premier conference providing a forum for research scientists, engineers, and practitioners to present and discuss latest research findings, ideas, and emerging technologies and applications in the area of power systems integrations, business models, technological advances, policies and regulatory frameworks for the African continent. The conference will feature keynote addresses and invited presentations by distinguished scientists and engineers.

The Seventh Annual IEEE PES/IAS PowerAfrica Conference (PAC 2020) will be held virtually from August 25 to August 28, 2020 under the theme "Sustainable and Smart Energy Revolutions for Powering Africa".

Objectives

1. To create platform for participants from manufacturing, academia, telecommunication companies, technology companies, electric utilities and the entire energy industry to discuss on bringing energy to Africa, through expert-lead content, business driven experiences, networking and strategic partnerships with the industry.

2. To provide attendees with practical, solution-oriented topics, including case studies and lessons learned, via a diversified technical program consisting of exhibitions, tutorials/workshops, keynote/plenary speeches, poster and oral presentations.

3. The technical program is meant to create action plans and follow-up actions on outcome of the conference and reinforce partnerships. Previous editions of the conference have been held in Johannesburg, South Africa ('07 and '12), Livingston, Zambia ('16), Accra, Ghana ('2017), Cape Town, South Africa ('18), Abuja, Nigeria ('19).

WORD OF WELCOME BY THE CONFERENCE CHAIR

Eng. Eliud Limo

CONFERENCE GENERAL CHAIR

Dear Friends and colleagues,

I would like to extend my warm greetings and to welcome you to the 7th IEEE PowerAfrica Conference on sustainable and smart energy revolutions for powering Africa.

I would like to welcome you all to join us from all over the world to present your cutting edge research and to provide valuable feedback on colleagues' works. We are all about to have a new experience as we'll be hosting the conference virtually for the first time. And we want you all to feel and cherish this novelty and opportunity as much as possible.

The conference will provide a forum for our participants to present and discuss latest research findings, ideas and emerging technologies and applications in the area of power systems integrations, business models, technology advances, policies and regulatory frameworks for the African continent.

The conference will feature keynote addresses and invited presentations by distinguished scientists and engineers.

I therefore welcome you all to this conference conference.

Dr. Eng. Joseph Njoroge

Principal Secretary, State Department of Energy
Ministry of Energy, Kenya.

Thank you for the opportunity to give the opening remarks of the Power Africa Virtual Conference 2020. I would like to congratulate you for being agile and holding the conference virtually due to the current circumstances. This is surely part of the new normal: thinking outside of the box!

The conference theme for this year is Sustainable and Smart Energy Revolutions for Powering Africa, which I believe aims to achieve the sustainable development goal 7, which is to ensure access to affordable, reliable, sustainable and modern energy for all. There is no better time to discuss these matters other than now, when as a country, we are working to achieve the Vision 2030. The Ministry of Energy is at the forefront of this challenge to ensure that this vision is accomplished, energy being a key enabler to the success of the vision. Some of the projects done to achieve this include:

1. The last mile project, which was a national government project, through the Ministry of Energy to ensure affordable electricity connections to households achieving over 70% connectivity putting Kenya ahead of the pack in the Eastern Africa region.
2. Street lighting project where more than 35,000 streetlights have been installed in towns in Kenya and
3. The Kenya Off-Grid Solar Access Project (KOSAP) which is a flagship project of the Ministry of Energy, financed by the World Bank. This project aims at providing electricity to sections of the country that are not served by the national grid.

The Ministry also supports the achievement of the Big 4 Agenda, which is our President's development blueprint, by ensuring that there is access to affordable, clean and reliable electricity mainly to further the cause of the manufacturing industry. The goal is to convert Kenya from a trading nation into a manufacturing nation serving first the regional market and thereafter the global market.

It is worth noting that for effective delivery of these projects, and eventually, national development, there is need for collaboration between Academia with its prowess on research, capacity building and product development; the Private sector with its ability to positively impact society with goods and services and make investment high above the amounts raised by NGOs; the Government with its unique contribution to provide suitable policies and regulations which bring all together in a spirit of transparency and care for the common good. This triple helix cooperation will not only make Kenya to reach the Vision 2030 but will help the three stakeholders to improve in the delivery of their specific mission.

It is my prayer that the brilliant research findings and deliberations presented in the IEEE PES/ IAS Power Africa 2020 Conference starting today will find their way back to the industry players, academia and the government, so that they can be of use to the communities whom they all serve.

I wish you a fruitful conference, and I am looking forward to meeting you all physically in next year's Power and Energy Conference at Strathmore University.

WHAT YOU WILL EXPERIENCE DURING THE POWERAFRICA CONFERENCE 2020

Get to enjoy the first ever virtual Powerafrica Conference. You will have the opportunity to discuss latest research findings, ideas, and emerging technologies and applications in the area of power systems integrations, business models, technological advances, policies and regulatory frameworks for the African continent.

The conference will feature;

- Keynote addresses from prominent industry leaders
- Paper presentations by distinguished scientists, researchers and engineers.
- Industry sessions from leading experts.
- Registered Professional Engineers in Kenya get to earn 12 Professional Development Units.
- Get to experience the Virtual conference from anywhere you are through the PowerAfrica Conference Mobile App

Get to enjoy these and so much more....We are happy to host you!

PAC20-Program at a glance Day 1

IEEE Power Africa 2020 25-28 August 2020 Virtual Conference	Break	Plenary
	Technical Session	Smart Village
	General	Tutorial
	Live event ZOOM	Q&A (Simulive text chat)

Note 1: Tutorials, PhD Forum, and Industry Sessions will be available at time shown, and on demand throughout the conference starting 2 hours after conclusion of event.
Everything else will be available only at the time shown, and on demand starting day after the conference.
Note 2: All Live sessions done via ZOOM
Note 3: Technical session Q&As done asynchronously (Chat/email, "Simulive")

Time in GMT

GMT	Start	End	Duration	DAY 1: Tuesday 25 August 2020
Opening	06:00	06:28	0:28	Welcome Address - Introduction to PowerAfrica - **Limo Eliud**, *Conference General Chair* Welcome Address - Dr. Eng. Joseph Njoroge, MBS, Principal Secretary, State Department of Energy, Kenya Welcome Address - Introducion to IEEE Power & Energy Society - Frank C. Lambert, PES President Welcome Address- Introduction to Industry Applications Society - Georges Zissis, IAS President
Tutorials & PhD Forum	06:30	08:00	1:30	**Tutorial #1: "Entrepreneurship"** Dr. Surya Raghu; Ken Stauffer; Mercy K. Kainobwisho; Samantha Snabes, **Sponsored by IEEE**
	08:00	08:30	0:30	
	08:30	09:00	0:30	
	09:00	09:30	00:30	**Q&A sessions for tutorials 1, 2, and 3 in the afternoon.**
	06:30	08:00	1:30	**Tutorial #2:** **"Safety Through Proper System Ground and Ground Fault Protection"** Lecturer: John NELSON
	08:00	08:30	0:30	Movie "Film on Safety Awareness", by IEEE IAS Hyderabad Chapter, available for viewing in English, French, Spanish, Portuguese, and Arabic.
	08:30	09:00	0:30	
	09:00	09:30	00:30	
	06:30	08:00	1:30	**Tutorial #3** "Fundamentals of Off-Grid Electricity Access" Lecturer: Dr. Henry LOUIE
	08:00	08:30	0:30	
	08:30	09:00	0:30	
	09:00	09:30	00:30	
	06:30	08:00	1:30	PhD Forum Workshop Moderators: Dr. Imed Ben Dhaou and Dr. Irene Samy Fahim Speakers: Ken Stauffer, Chair, IEEE Entrepreneurship Steering Committee Prof. Ahmed Abdelgawad, Central Michigan University Prof. Wei-Jen Lee, The University of Texas at Arlington, Prof. Irene Samy Fahim, Nile University, Egypt: Prof. Olfa Kanoun, Chemnitz University of Technology, Germany
	08:00	08:30	0:30	
	08:30	09:00	0:30	
	09:00	09:30	00:30	**Q&A - PhD Forum Zoom**
	06:30	08:00	1:30	
	08:00	08:30	0:30	**IEEE Humanitarian Activities** Education Training session **Speaker:** Prof. Shaikh Fattah, Bangladesh University of Engineering and Technology
	08:30	09:00	0:30	
	09:00	09:30	00:30	**Q&A Zoom**
	09:30	10:00	00:30	**Break**
Industry Sessions				**Industry Session #1: OMICRON**
	10:00	11:00	01:00	Case Study on Model Based Testing Speaker : Fadi Zatari, Area Sales Manager, Omicron
				Q&A for Industry session #1
				Industry Session #2: OMICRON
	11:00	12:00	01:00	Non-Intrusive Condition Assessment of High Voltage Circuit Breaker Contacts using DRM Speaker : Aditya Taneja, Regional Applications Specialist, Omicron
				Q&A for Industry session #2
				Industry Session #3: OMICRON
	12:00	13:00	01:00	Diagnostic and Fault Location on Onload Tap Changers – Case studies Speaker : Sofiane Bakkay, Regional Application Specialist, Omicron
				Q&A for Industry session #3
YP	13:00	14:30	01:30	Panel #1: Young Professionals **"Youths providing hope to power the future of Africa"** Moderator: Abdullateef Aliyu Panelists: John Hofman, Burns & McDonnell, Vancouver, WA, USA; Sainab Taiwo Ninalowo, ComEd, Chicago, IL, USA; Sımay Akar, Suzhou Talesun Solar Technologies Co. Ltd, Suzhou, China; Samantha Niyoyita, AIF, Kigali, Rwanda; Sally Musonye, Kenya Power, Nairobi, Kenya.
Tutorial Q & A and African Executive Forum	14:30	15:00	00:30	Q&A of Tutorial 1 "Entrepreneurship" Dr. Surya Raghu & Mercy K. Kainobwisho
	15:00	15:30	00:30	Q&A - Tutorial #2: "Safety Through Proper System Ground and Ground Fault Protection" John Nelson
	15:30	16:00	00:30	Q&A - Tutorial #3: "Fundamentals of Off-Grid Electricity Access" Dr Henry Louie
	14:30	15:00	00:30	**African Executive Forum - Live** Topic No. 1: Financing Transmission Projects in Africa Topic No. 2: Energy Transition in Africa **Moderators:** Panos Vlahakis, Senior Operations Officer, Upstream, IFC, Istanbul, Turkey Prof. Izael da Silva, DVC - Research and Innovation, Strathmore University, Nairobi, Kenya
	15:00	15:30	00:30	
	15:30	16:00	00:30	

Day 2

IEEE Power Africa 2020 25-28 August 2020 Virtual Conference	Break	Plenary	General	Live event ZOOM
	Technical Session	Smart Village (1)	Tutorial	Q&A (Simulive text chat)

(1) Smart Village sessions in Green are pre-recorded
(2) Smart Village sessions live via ZOOM

GMT	Start	End	Duration	DAY 2: Wednesday 26 August 2020						
PhD Forum	06:00	07:00	01:00	Postgraduate Forum Poster Session: [78] Pauline K.- Embedded power system monitoring of illegal connections in Kenyan domestic supply [94] Bertie J. - An objective review of erection methods for overhead line towers devoid of Ccranes [99] Denis J., et. al. - Progress in grid interconnection in East Africa: Challenges, Experiences and Opportunities [262] Susan K et. al.- Under voltage load shedding using hybrid metaheuristic algorithms for voltage stability enhancement: A review						
	07:00	07:30	00:30	Q&A Postgraduate Forum						
	07:30	08:00	00:30	Break						
Plenary				Plenary Session (1)						
	08:00	08:30	00:30	Keynote Speaker 1: Eng. Martha Cheruto, Deputy CEO, Kenya Private Sector Alliance (KEPSA) Topic: Private Sector Role in Driving Demand for Power						
	08:30	09:00	00:30	Keynote Speaker 2: Prof. Izael da Silva, Director Strathmore Energy Research Center & DVC - Research and Innovation, Strathmore University Topic: Universal Access to Electricity in Africa						
	09:00	09:30	00:30	Keynote Speaker 3: Eng. Jared O. Othieno, CEO, Geothermal Development Company Topic:Delivering Menengai Phase 1 Geothermal Project through Public Private Partnership						
	09:30	10:15	00:45	Q&A for Speakers 1, 2, and 3						
	10:15	10:30	00:15	Lunch Break						
Technical papers				Track 1a: Smart Grid, Microgrid, Metering Design and Cyber Security, FACTS	Track 2a: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 3a: Electrical Safety, Power System Protection & Standards	Track 4a: Power Converter Topologies, Modulaton and Control	Track 5a: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	Track 6a: Electric Machines, Drive Systems and Topologies	Smart Village Session 1
	10:30	10:45	00:15	[34]-Rosalia S. et al-Design of Utility Harmonic Mitigation Filters for Power Transformers	[3] Samuel Kibara et. al., Analysis of the Levelized cost of Electricity (LCOE) of Solar PV Systems considering their Environmental impacts on Biodiversity	[6]-Seboniso N. et al.-EARTH GRID DESIGN FOR 400KV NEIUWEHOOP SUBSTATION USING CDEGS PLATFORM	[30]-Josiah M. -Analysis of Basics of Modulation Techniques on Sing-Phase AC Drive for Effeciency Improvements	[4] Zacchaeus A. et. al.- An Investigation into the Utilisation of Energy Saving Lamps in Residential Buildings-A Case Study of Lagos Nigeria	[9]-Ekom O.-Investigating the Dynamic Behaviour of a Six-Phase Induction Motor under Unbalanced Faults	"""10+ Years of Smart Village"" by Co-Founders Ray Larsen and Robin Podmore ""What is ISVx?"" by John Nelson, Chair of Management Committee "
	10:45	11:00	00:15	[43]-Jane N. et.al-Designing Affordable Rural Community Microgrids	[11] Melakus Matewos et. al., Damping Higher Frequency Resonance of Grid Connected DFIG System	[13]-Gerhard S. et al.-Differential Protection of Distributed Generation Interfaced Network	[117]-Peter G. -LQR Technique for Optimal Load Frequency Controller Design of Interconnected Linear Power Systems with Quadratic Performance Index.	[17]-Sun W. et. al.-Analysis of Electrical Characteristics And Performance of Poly-Crystalline Solar PV Module By I-V Tester Under Temperature And Solar Irradiance Variation in Spring Season	[25]-Given S.M.-Broken Rotor Bar Fault Simulation and Analysis in D-q Reference Frame	
	11:00	11:15	00:15	[54]-Kihembo S.M. et al-A Novel Energy Management Technique for Shared Solar and Storage Resources in Remote Communities	[14] Amer Syed et. al., A Systems Based Modelling Tool for the Selection of Wave Energy Device to Power Remote Islands	[50]-Nathan M. et al-The Basics of Transmission Line Protection	[118]-Dickson C. -Analytical model for the prediction of the Magnetic Field Distribution due to a finite length Permanent Magnet array for a Radially Magnetized Linear Oscillatory Machine	[18] Wang Y. et. al.- Renewable energy access in Rwanda: Electricity Price Forecasting	[105]-Mengesha M.- Half-wave Rectified Synchronous Motor Using Inverter Carrier- Frequency Current for Excitation	Update 1 Africa Development Promise - Rwanda
	11:15	11:30	00:15	[55]-Fabien M. et al-Smart power generation and usage using Off-grid hydropower plants in plants in Rwanda	[15] Ashraf A. A. et. al., Algorithm to Pinpoint the Maximum Power Points on the Power-Voltage Curve of PV Arrays under Different Conditions	[80]-Wyclife O.A. et al-Non-Technical Power Loss Reduction and Transients Stability: Optimal Placement of Reclosers	[131]-Francis M.- Virtual-Flux based Active Power Filter for Power Quality Improvement	[28] Julius K. et. al.-An Adaptive Hybrid Meta-heuristic Approach for Transmission Constrained Multi-objective GEP	[112]-Adisu T.-Analysis of common-mode EMI in PM synchronous machines with fractional-slot concentrated winding	Update 2 Beyond Chacay Foundation - Galapagos
	11:30	11:45	00:15	[71]-Stefano G. et al-Engineering of Power Flow Control across the Zambia – Zimbabwe Interconnector with Phase-Shifting Transformers	[16] Sun Wanquan et. al., Modelling a 30kw Standalone Solar Powered Irrigation System	[89]-Andris S. et al-Protection Challenges in a Stand-alone Microgrid: Case Study of Tsumkwe Microgrid	[178]-Benson O.-Fast Frequency Control in Multi-Terminal DC Networks	[29] Anh T. et. al. -The Novel Design of Feed-water Control System for Thermal Power Plant Using Super-critical Start-up Motor-Boiler Feed-water Pump	[136]-Mbika M.- Performance Evaluation of a Five-Phase Fractional-Slot Distributed Winding Assisted Permanent Magnet Synchronous Reluctance Motor for Traction Applications	Update 3 Waste Energy Technologies - Malawi
	11:45	12:00	00:15	[84]-Nelson B. et al-New approach for design shunt active power filter for power quality improvement in a three phase three wire system	[19] Richard Oladayo et. al., Performance analysis of a proposed 75MW grid connected solar PV in Kankia, Nigeria	[90]-Julius N. et al-Appropriate Surge Arrester Lead Lengths for Improved Distribution Transformer Protection – Kenyan Case Study	[182]-Akshay P.- Stability Analysis of DC-DC Boost Converter using Sliding Mode Controller	[33] Shekinah K. et. al.-Design and Monitoring of a Voltage battery sensor of an Uninterruptible Power Supply (UPS) by means of an Arduino Technology	[204]-Mohab G. - Studying the Effect of Using Multi-Phases Switched Reluctance Motor to Reduce the Torque Ripple for Ship Propulsion system.	Update 4 Darway Coast Nigeria Limited - Nigeria
	12:00	12:15	00:15	[88]-Anuoluwapo A. et al-Impact Assessment and Mitigation of Cyber Attacks on Frequency Stability of Isolated Microgrid Using Virtual Inertia Control	[20] Ibrahim Haruna et. al., Smart Traffic Roads Junction Energy Exploration for Electrical Energy Generation		[200]-Wenhao X.- Comparison Study of Control Methods for Resonant Switched-Capacitor Converters	[46] Godwin A. et. al.-Gender mediated optimal multivariate electricity load management model	[276]-Thembi M.-Fault diagnosis of power transformers using Duval triangle	Update 5 Global Himalayan Expedition - India
	12:15	12:30	00:15	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Update 6 Green Village Electric - Nigeria
	12:30	12:45	00:15							Live Q&A Session for Entrepreneurs 1-6 (Simulive text chat
	12:45	13:00	00:15	Break						
Panel WiP	13:00	14:00	01:00	"Panel #2: Women in Power, Part 1 Topic: ""Women in Power as Drivers of Social and Economic Transformation"" Speakers: Dr. Ruomei Li (Chair of PES WiP), Simay Akar (PES WiP), Dr. Xiaoqian Li, Prof. Saifur Rahman, Prof. Noel Schulz Moderator: Mercy Chelangat Koech"						
	14:00	14:20	00:20	"Panel #2: Women in Power, Part 2 Topic: ""Women in Power Breaking the Glass Ceiling"" Speakers: Mercy Chelangat Koech, Yasmine Chelly, Engr. Maimunah Ogunniyi, Dr. Omowunmi Mary Longe, Dr. Sandrine Mubenga Moderator: Dr. Omowunmi Mary Longe"						
	14:20	15:00	00:40	Panel Discussion (live) - WiP for Parts 1 and 2						
	15:00	15:15	00:15	Break						
Plenary Session				Plenary Session (2)						
	15:15	15:45	00:30	Keynote Speaker 4: Prof. Wei-Jen Lee, University of Texas at Arlington Topic: Arc Flash Hazard and Electrical Safety, The New Revision of IEEE Std 1584						
	15:45	16:15	00:30	"Keynote Speakers 5: Kartik Kulkarni, Chair, IEEE Humanitarian Activities Chair and John Oyewole Funso-Adebayo, Chair, Nigerian Institute of Electrical and Electronic Engineers (NIEEE) Topic: Updates from the IEEE Humanitarian Activities Committee (HAC)"						
	16:15	16:45	00:30	Q&A for Speakers 4 and 5						
				Break						
ISV	17:00	18:00	01:00							ISV Delegate Networking Open "Happy Hour" Discussion Moderator: Mike Wilson

Day 3 Part 1

IEEE Power Africa 2020 25-28 August 2020 Virtual Conference	Break	Plenary	General	Live event ZOOM
	Technical Session	Smart Village (1)	Tutorial	Q&A (Simulive text chat)

(1) Smart Village sessions in Green are pre-recorded
(2) Smart Village sessions live via ZOOM

GMT	Start	End	Duration	DAY 3: Thursday 27 August 2020						
Technical papers				Track 1b: Smart Grid, Microgrid, Metering Design and Cyber Security, FACTS	Track 2b: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 3b: Electrical Safety, Power System Protection & Standards	Track 4b: Power Converter Topologies, Modulaton and Control	Track 5b1: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	Track 5b2: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	Smart Village Session 2
	06:00	06:15	00:15	[96]-Chukwuemeka C. et al-Utilisation of FACTS Devices in the Nigerian Transmission Grid	[22] James Muruiki et. al., A modal analysis of a two area system integrated with wind power through a VSC-HVDC system for small-signal stability improvement.	[93]-Joseph A. et al-Generation System Adequacy Assessment Using Analytical Technique	[201]-Wenhao X.-Step-up Ladder Resonant Switched-Ca-pacitor Converters with Full-Range Regulation	[47] Julius K. et. al.-Security Constrained MODGTEP using Adaptive Hybrid Meta-heuristic Approach	[82] Shafiqa K. et. al.-Assessing the Techno-economic Feasibility of eCook Deployment on a Rural Mini-grid in Malawi	Update 7 - Future Generations University - Vietnam
	06:15	06:30	00:15	[97]-Elutunji B. et al-Modeling and Analysis of Standalone Inverter-Based Microgrid with Grid-Supporting Voltage-Source Control under Changing Load	[23] Jyh-Cherng Gu et. al., Application of Feature Selection and Neural Network to the Forecasting of Ultra-Short-Term Photovoltaic Power Generation	[100]-Abel A. et al-On the Prediction of Feeder Trip Profile of Power System Network using Artificial Neural Network	[205]-Amritansh S. -Design and Analysis of A Robust High Density Buck-Wireless Power Transfer System	[51] ye-Obong U. et. al. -Blackout and Black Start Analysis for Improved Power System Resilience: The African Experience	[102] Isaac O. et. al.-Investigation of Voltage Stability for Transmission Network with High Penetration of Wind Energy Sources	Update 8 - Renewable Energy Innovators - Cameroon
	06:30	06:45	00:15	[126]-Sindi N. et al-The implementation of smart meters for electric grid improvements and reliable power flow data on electrical power distribution networks	[24] Ntombifuthi Ngwenya et. al., Switching Transient Analysis of Capacitor Coupled Substation (CCS)	[137]-Andrew S. et al-Resistivity of Surface Materials for Substation Earthing	[206]-M. Karthick -Electric Hover Board	[56] Vincent B. et. alELECTRICITY CONSUMPTION MODELING and MEDIUM-TERM FORECASTING BASED ON GROUPED GREY MODEL, GGM(1,1)	[107] Emmanuel M. et. al.-Development and Analysis of Rwanda's future Energy Scenarios as input for long-term regulated investment in electricity systems planning	Update 9 - Seva Bharati - India
	06:45	07:00	00:15	[140]-Yona A. et al-Enhancing Communication Network Availability for Secondary Distribution Power Grid Management	[26] Thamsanqa G. M. et. al., Maximum Power Point Tracking for Solar Laptop Chargers	[139]-Uma U.-An Adaptive Distance Protection Scheme for High Varying Fault Resistances	[215]-Mpho L.- Towards Performance Enhancement of Lead-Acid Battery for modern Transport Vehicles	[60] Samwel O. et. al.-STATCOM Application for Grid Dynamic Voltage Regulation: A Kenyan Case Study	[116] Isaac O. et. al.-Policy Review of Impact of Distributed Generation on Power Quality	Update 10 - Shakti Empowerment Solutions - India
	07:00	07:15	00:15	[142]-Yifu D. et al-Model Predictive Control for Grid-ready Microgrids in developing countries	[35] Samson Obu et. al., Benefits of Electric Vehicle as Mobile Energy Storage System	[180]-Deba M. et al-Transformer Dielectric Liquid: A Review	[248]-Heman S.- Thermal model and disturbance co-identifica-tion using optimization and filtering techniques	[62] Alycia L. et. al.-Geospatial Clustering and Network Design for Rural Electrification in Africa	[120] Deo G. et. al.-Energy Efficiency for Residential, Commercial and Industrial application	Update 11 - Shaybis Nigeria Limited - Nigeria
	07:15	07:30	00:15	[145]-Vinny M. et al-Review of switching and control techniques of solar microgrids	[36] Adeyinka A. et. al., Grid integration of wind energy: The South African challenge	[208]-Emmanuel F. et al-Wavelet Analysis and Neural Network Scheme for Predicting Transient Stability Status		[73] Daniel Z. et. al.-Learning from Failure: A Case Study of Repairing a Pico-hydropower System in Rwanda	[122] Elutunji B. et. al.-South Africa Electricity Supply System: The Past, Present and The Future	Update 12 - Torchbearer Foundation - Cameroon
	07:30	07:45	00:15	[146]-Derek N. et al-Demand Side Energy Management and Customer Behavioral Response in a Rural Islanded Microgrid	[37] Gatachew Bekele et al., Distribution Transformer Failure Study and Solution Proposal in Ethiopia	[244]-Andris S. et al-Overcurrent Protection of a Stand-alone Microgrid with Static and Rotational Generators: Case Study of Tsumkwe Microgrid		[79] Precious K. et. al.-Design of an Automatic Hybrid Water Heating System	[123] Jacquelynne H. et. al.-Use of Multiple Linear Regression Techniques to Predict Energy Storage Systems' Total Capital Costs and Life Cycle Costs	Update 13 - The Maa Trust - Kenya
	07:45	08:00	00:15	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Update 14 - 1000 Hills Honey - Rwanda
	08:00	08:15	00:15							Live Q&A Session for Entrepreneurs 7-14 (Simulive text chat)
	08:15	08:45	00:30	Break						
	08:45	09:00	00:30							
Plenary and ISV Sessions				Plenary Session (3)						
	09:00	09:30	00:30	Keynote Speaker 6: Vincent Kaabunga, Chair, IEEE Africa Council Topic: IEEE on the March in Africa						
	09:30	10:00	00:30	Keynote Speakers 7: Dr. Sreevas Sahasranamam and Mr. Abhik Banerji, IEEE HAC Topic: Assessment Practicum: The Purpose and Practice of Assessment						
	10:00	10:30	00:30	Q&A for Speakers 6 and 7						
	10:30	11:00	00:30	Break						
Technical papers				Track 1c: Smart Grid, Microgrid, Metering Design and Cyber Security, FACTS	Track 2c1: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 2c2: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 3c: Electrical Safety, Power System Protection & Standards	Track 5c1: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	Track 5c2: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	Smart Village Session 3
	11:00	11:15	00:15	[151]-Linus A. et al-Model Predictive Control-Adaptive Neuro-Fuzzy Inference System Control Strategies for Photovoltaic-Wind Microgrid: Feasibility Review	[38] Bukola B. B., et. al., Voltage Stability Analysis and Improvement of Power System With Increased SCIG-based Wind System Integration	[111] Naomi Ntahmbi et. al., Integrated Load and Renewable Energy Forecasting in Micro-Grid Power Supply	[257]-Isaiah A. et al-Performance Evaluation of Voltage Stability Indices for a Static Voltage Collapse Prediction	[82] Shafiqa K. et. al.-Assessing the Techno-economic Feasibility of eCook Deployment on a Rural Mini-grid in Malawi	[125] Agnes R. et. al.-Application of occupancy-interlinked inhabitant behavior variables for improved energy and load profiles modeling	"Where Do We Go from Here?" Advanced Microgrid Design Operation, Maintenance, Expansion Lecturer: Dr. Henry Louie (1 1/2 Hour)
	11:15	11:30	00:15	[155]-Elizabeth Y. et al-Load Profile Prediction Using Customer Characteristics	[39] Bonginkosi A T., et. al., Step-Up Transformers for Solar PV Plants: Load Loss Estimation under Harmonic Conditions	[114]Olusayo et. al., Renewable DGs' Uncertainty Modelling: A Survey	[265]-Emmanuel F. et al-Inter-Turn Fault Detection Using Wavelet Analysis and Adaptive Neuro-Fuzzy Inference System	[102] Isaac O. et. al.-Investigation of Voltage Stability for Transmission Network with High Penetration of Wind Energy Sources	[160] Obindah G. et. al. -Energy Intensity and Economic Growth in Selected West African Countries	
	11:30	11:45	00:15	[156]-Prinavin P. et al-Experimental Setup for a Small-Scale Domestic PV System	[40] Bonginkosi A T., et. al., Total Ownership Cost Evaluation for Transformers within Solar Power Plants	[121] Hannibal Tesfahunegn et. al., Integrating Decentralized Renewable Energy for Least-Cost, Universal Electrification in Uganda	[267]-Gideon D. et al-Neural Network Based Transformer Incipient Fault Detection Technique	[107] Emmanuel M. et. al.-Development and Analysis of Rwanda's future Energy Scenarios as input for long-term regulated investment in electricity systems planning	[175] Obindah G. et. al.-Meta-Analysis of Electricity Pricing in West Africa	
	11:45	12:00	00:15	[161]-Dion N. et al-Packet Analysis of DNP3 protocol over TCP/IP at an Electrical Substation Grid modelled in OPNET	[41] Uche C Ogbuefi. et. al., Stand Alone Solar System: A Viable Option For Electricity	[130] Benso O O, et. al., Developing an Environmental Decision Making Model for Optimal Solar and Wind Energy Utilization	[268]-Desmond H. et al-Detection of Inter-Turn Faults in Transformers Using Continuous Wavelet Transform and Convolutional Neural Network	[116] Isaac O. et. al.-Policy Review of Impact of Distributed Generation on Power Quality	[185] Victor A. et. al.-The Insight and Foresight of the Nigerian Power Transmission System: An overview.	
	12:00	12:15	00:15	[174]-Oluleke B. et al-High-Bandwidth Distributed Virtual-Inertia Converters for AC Microgrids	[44] Joseph Karanja et. al., Optimal Battery Location for Minimizing the Total Cost of Generation in a Power System	[101] Isaac Otchere et. al., Adaptive PI-GA Based Technique for Automatic Generation Control with Renewable Energy Integration	[269]-Joniff W. et al-IEC61850 standard-based motor protection scheme	[120] Deo G. et. al.-Energy Efficiency for Residential, Commercial and Industrial application	[190] Abraham K. et. al.-Short-Term Load Forecasting for Commercial Buildings Using 1D Convolutional Neural Networks	

Day 3 Part 2

GMT	Start	End	Duration	DAY 3: Thursday 27 August 2020						
	12:15	12:30	00:15	[227]-Khaled A. et al-Demand Response-Based Voltage Regulation in Distribution Networks	[45] P. Manditereza, Rocof enhancement using synchronous condensers in systems integrated with renewable energy sources	[109]Adedayo A et. al., Optimal design of conductive and inductive charging system for bus rapid transit network	[272]-Julio F.C.A. et al-Power Quality Improvement with SVC in a Power System of 220kV	[122] Elutunji B. et. al.-South Africa Electricity Supply System: The Past, Present and The Future	[193] Qingyao Q. et. al.-Predicting building energy consumption based on meteorological data	
	12:30	12:45	00:15	[242]-Lukman A.A. et al-Modeling and Implementation of Smart Home and Self-control Window using FPGA and Petri Net	[52] Ahmaed E E., et al., 1D Si P-N Junction with Organic Materials and Transparent conductive oxides (TCOs) Alternatives		[[283]-Sydney K.Z. et al-Impact of Tropical Cyclone Idai on the Southern African Electric Power Grid	[123] Jacquelynne H. et. al.-Use of Multiple Linear Regression Techniques to Predict Energy Storage Systems' Total Capital Costs and Life Cycle Costs	[195] Nnachi G. et. al.-Modeling and simulation of conveyor belt for energy efficiency studies	"""A New Approach"" ISVx Educational Program Presenters: Dr. David Lansdale & Dr. Pali Singha"
	12:45	13:15	00:30	**Q&A (Simulive text chat)**	**Q&A (Simulive text chat)**	**Q&A (Simulive text chat)**	**Q&A (Simulive text chat)**	**Q&A (Simulive text chat)**	**Q&A (Simulive text chat)**	
	13:15	13:30	00:15	**Break**						
Panel	13:30	15:00	01:30	**Panel #3:** *"Electrical Safety & Standards"* Speakers: Daleep Mohla, John Nelson, Daryl Ray Crow, Geisel Custodio, Yabicha Oche Shibia						
				Panel Disucssion (live)						
	15:00	15:30	00:30	**Break**						
				Plenary Session (3)						Smart Village Session 4
Plenary and ISV Sessions	15:30	16:00	00:30	Keynote Speaker 8: Prof. Imed Ben Dhaou Topic: IoT for Smart Grid						"""Chasing Rainbow's Pot-O-Gold"" Funding opportunities outside of IEEE PANEL - LIVE Moderator: Monica Labiche Brown (1-hr)"
				Keynote Speakers 9: Ian Baring-Gould, Eric Lockhart and Tim Reber, National Renewable Energy Laboratory, USA Topic: Power System Transformation and the Evolving Minigrid						
	16:00	16:30	00:30	**Q&A for Speakers 8 and 9**						"Entrepreneurship Ain't Easy" a) Global market identification & engagement (20-min) b) Difference business models & solutions to businesses (20-min) Presenter: Ken Stauffer - IEEE Entrepreneurship program (45-min total)
	16:30	17:15	00:45							
	17:15	18:00	00:45	**Break**						
	18:00	19:30	00:30							"ISV Delegate Networking ZOOM Open ""Happy Hour"" Discussion Moderator: Mike Wilson

Day 4 Part 1

IEEE Power Africa 2020 25-28 August 2020 Virtual Conference	Break	Plenary	General	Live event ZOOM
	Technical Session	Smart Village (1)	Tutorial	Q&A (Simulive text chat)

(1) Smart Village sessions in Green are pre-recorded

(2) Smart Village sessions live via ZOOM

GMT	Start	End	Duration	DAY 4: Friday 28 August 2020						
Technical papers				Track 1d: Smart Grid, Microgrid, Metering Design and Cyber Security, FACTS	Track 2d1: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 2d2: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 2d3: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 5d1: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	Track 5d2: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	Smart Village Session 5
	06:00	06:15	00:15	[253]-Md J.H. et al-Different Controlling Techniques of a PV-Based Microgrid Systems with Reduced Harmonics	[53] Famous O I., et. al., Internet of Renewable Energy (IoRE) and Power Cable Technologies for Regional Electricity Grids Integration	[130] Benso O O, et. al., Developing an Environmental Decision Making Model for Optimal Solar and Wind Energy Utilization	[168] Leonard Ndahepele et. al., Impact of Distribution Generation on Traditional Protection in Distribution and Transmission Systems: A Review	[202] Christina B. et. al.-Electrical consumption in the Higher Education sector, during the COVID-19 shutdown	[247] Alois M. et. al.-Regional Energy Supply Index (RESI): Using Open Source Data to Monitor Electricity Reliability Across Sub-Saharan Africa	"""Smiling in your Village"" People Management Skills Training Presenter: (TBA via Monica L-B) (45-min)"
	06:15	06:30	00:15	[259]-Julio F.C.A. et al-Power Quality with MPPT Controller and Irradiance Uncertainty for Grid-Connected Photovoltaic Energy System	[58] Jeff Watitwa et. al., Active Distribution System State Estimation: Comparison Between Weighted Least Squares and Extended Kalman Filter Algorithms	[134]Hamza Mustapha and M Buhari, A Dynamic Genetic Algorithm based Power System Stabilizer for Improving Small-signal Stability of Grid-connected PV System	[163] Aban Ayik et. al., Selection of Off-Grid Renewable Energy Systems using Analytic Hierarchy Process: Case of South Sudan	[203] Al Motasem A. et. al.-Statistical Analysis of Wind Power Using Weibull Distribution to Maximize Energy Yield	[249]Qingyao Q. et. al.-Hybrid method for building energy consumption prediction based on limited data	
	06:30	06:45	00:15	[278]-Tahir A.Z. et al-Review of Multi-Agent Micro-Grid Systems	[64] Bombay B, et. al., Analysis of torsional stress and fatigue of turbine-generator shafts during islanding	[141] Mohab Gaber et. al., Performance Enhancement of Ship Hybrid Power System using Photostatic Arrays	[166] Jonas Idoko et. al., Design of Automatic Solar Tracking System Prototype to Maximize Solar Energy Extraction	[207] Elvis T. et. al.-Improvement of Grey System Model Using Particle Swarm Optimization	[251] Siyanda N. et. al.-Sizing and Locating Shunt Capacitors in a Voltage Constrained South African Distribution Network	
	06:45	07:00	00:15	[176] Beatrice Kamau, Electric Matatus in Nairobi	[65] Paul Musyoka et. al., Optimal Load Shedding Scheme for a Model Renewable Energy Micro-Grid	[144] Ameen Ghoor et. al., Design of Adaptive Overcurrent Protection Scheme for a Grid-Integrated Solar PV Microgrid	[167] Andre Zau et. al., Review of Battery Management Strategy in Hybrid Lead-Acid-Lithium-Ion Energy Storage System for Transport Vehicles	[216] Oluleke B. et. al. -On Energy Efficiency of Sustainable Renewable Microgrids for Off-Grid Electrification	[254] Paul O. et. al.-Kruskal's Algorithm, Vogel's Approximation and Modified Distribution Methods for the Design of Optimal Electrical Networks in the Democratic Republic of Congo	"""Will it Really Work? Really?"" Simulation/ design software for micro-grids Presenter: Peter Lilienthal of Homer Energy (45-min)"
	07:00	07:15	00:15	[177] Mary Ahuna et. al., Pylon Anti-Vandalism Monitoring System using Machine Learning Approach	[66] Abayomi Adebisi et. al., Performance Evaluation of a Grid-tied PV System in the East Coast of South Africa	[154] Olugbenga Aluko et. al., A Clean and Renewable Energy-Utility Solution in Nigeria	[169] Tshwarelo M, et. al., Optimal Placement of Distributed Energy Resources using Particle Swarm Optimization Techniques: A Review	[219] Emmanuel F. et. al.-A Model for Predicting Unregulated Energy Usage	[256] Abdullateef B. et. al. -Identification of Critical Buses for FACTS Integration into Nigerian Grid	
	07:15	07:30	00:15	[179] Tsepo Sechoala et. al., Potential of Electricity Potential through Exploitation of Methane Gas from Landfilled MSW of Lesotho	[67] Irene Masenge et. al., Hybrid Solar PV-Wind Generation System Coordination Control and Optimization of Battery Energy Storage System for Rural Electrification	[157] Srdan Skok et. al., Impact of Electromobility to the Power Distribution System	[171] Oluwagbenga A et. al., A mathematical approach to hybrid wind farm modelling	[221]Tobiloba S. et. al.-Software for Improved Online Teaching of Power System Analysis for Undergraduates	[260] Abdullateef B. et. al.Optimal Placement of Single and Multiple FACTS Controllers Using Genetic Algorithm	
	07:30	07:45	00:15	[183] Anuradha S, et. al., Design And Analysis Of Grid-Connected PhotoVoltaic System By Using Different PWM Techniques For Inverter Control	[75] Bonginkosi A T, et. al., Service Life Estimation of Photovoltaic Plant Transformers under Non-Linear Loads	[158] Sula Ntsaluba et. al., Performance and Cost analysis of a Solar PV installation for buildings of Academic Institutions.	[172] Enock Chambile et. al., Grid Electricity Generation Systems Comparisons using the Life Cycle Carbon Emission Inventory	[222]Omowunmi M.L. et. al.-A Review of Energy and Gender Poverty Nexus in South Africa	[266] Matija P. et. al.-Modeling the impact of power generation on the water sector in the North, Eastern and Central African Power Pools	"""The Shocking Truth"" Working with Low Voltage Microgrid Power Generation, Transmission & Distribution Presenters: Paul Savage & Wayne Gutschow (45-min)"
	07:45	08:15	00:30	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	
	08:15	08:30	00:15	Break						
Plenary				Plenary Session (5)						Smart Village Session 6
	08:30	09:00	00:30	"Keynote Speaker 10: Eng. Erastus K. Mwongera, Chairman, Engineers Board of Kenya Topic: Engineers Board of Kenya: Mission and Vision"						"""A Learning Affair"" IEEE Learning Network, Resource Center, Certifications Presented by: Dean Fiorino IEEE PES eCommerece Product Manager (30-min)"
	09:00	09:15	00:15	Q&A for Speaker 10						
	09:15	09:30	00:15	Industry session #4						"""A Look from Afar"" Monitoring and Evaluation of Off-grid Energy Systems in Developing Countries Presenters: Dr. Alan Mickelson, Dr. Rajan Kapur (30-min)"
Industry Session	09:30	09:45	00:15	"Title: The Influence Of Photovoltaics Systems On Power Quality Speaker : Asaf Laifer, Metering & Protection Division Manager, Elspec Ltd"						
	09:45	10:00	00:15	Q&A for Industry Session #4						"""Add to your Toolkit"" How to measure tangible business/project impact Presented by: Tim Sparkman (30-min)"
	10:00	10:15	00:15							
	10:15	10:30	00:15	Break						"""Micro Grid Deployment via Eco Tourism"" A success story from the Himalayas Presenters: Paras Loomba & Jaideep Bansal (15-min)"

Day 4 Part 2

GMT	Start	End	Duration	DAY 4: Friday 28 August 2020						
Technical papers & Technial Tour				Track 2e1: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 2e2: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 2e3: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 2e4: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	Track 5e1: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	Track 5e2: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	Smart Village Session 7
	10:30	10:45	00:15	[192] Nathan S, et. al., Experimental investigation of incremental conductance-based MPPT for PV arrays	[76] Ryan Gilbert et. al., A Feasibility Study on Optimal RES Microgrid Design for Rand West Municipality	[230] Samson Obu S et. al., Benefits of Electric Vehicle as Mobile Energy Storage System	[252] Olugbenga Aluko et. al., A Review of the Control System Roles in Integrating Renewable Energy into the National Grid	[226] Isaiah A. et. al.-Evaluation Technique for Critical Nodes Identification in an Electrical Power Grid	[270] Amankwah E. et. al.-Biometric Class Attendance Register	"""Three Pillars to Success"" Seeking ISV Support for your Project Presenters: Dr. Dave Kankam & Dr. Avoki Omekanda (30-min)"
	10:45	11:00	00:15	[198] Satish Kumar P, et. al., Design and Development of Hybrid Wind–Solar–Battery Power Generation System using SVPWM Based Multilevel Inverter for Grid Connected Application	[83] Terry Chekpania et. al., Particle Swarm Optimized Power Grid Frequency Stability Control Scheme in the Presence of Wind Energy Sources.	[232] Bemdoo Saka et. al., Distributed Energy System in Nigeria: Potentials, Technologies, Benefits and Challenges	[255] Yekini S M., et. al., Application of Solar Energy Technologies in Nigeria: Overview of Significant Issues and Challenges	[234] Donald S. et. al. -Analysis of Water Treatment Plant Reliability Through WASRI Technique	[275] Stephen A. et. al.-Intelligent Energy Management Device for Energy Conservation in Air-conditioners	
	11:00	11:15	00:15	[212] Felicidade Garcia et. al., Access to Efficient and Sustainable Energy: Case of Madagascar	[86] Katleho Moloi et. al., Optimal Location of DGs Into the Power Distribution Grid for Voltage and Power Improvement	[236] Kwabena O S, et. al., An improved P&O MPPT algorithm under partial shading conditions	[258] Michael Rainey et. al., Load Modelling Effects on Power System Inertia Response	[235] Jorge A. et. al.-Falling Consumption and Demand for Electricity in South Africa - A Blessing and a Curse	[277] Sambu K. et. al. -A Case Study for Solar PV Powered Cooling System in Lagos, Nigeria	"""Mobilizing Resources for Fund Development"" Presenter: Dr. Saumya Arora (15-min)"
	11:15	11:30	00:15	[213] Likonge Makai et. al., Modeling of a Cost-Effective Implementation and Utilization Scheme for Micro-Hybrid Plants in Rural Areas: A case of Mayukwayukwa, Zambia.	[87] Madalitso Chikumbanje et. al., Enhancing electricity network efficiency in sub-Saharan Africa through optimal integration of minigrids and the main grid	[237] Arouna Oloulade et. al., Technical-ecological optimization of the operation of a multi-source electrical system injecting into a distribution network using Homer software and genetic algorithms	[261] Julio F C A. et. al., Electric Transportation by a solar vehicle for extreme conditions in the highlands above 3800 masl.	[238] Joe O. et. al.-Generation System Expansion Planning Using Loss of Load Expectation Criterion	[285] Ye-Obong U. et. al., Blackout and Black Start Analysis for Improved Power System Resilience: The African Experience	
	11:30	11:45	00:15	[220] Oluwagbenga A et. al., Improving the dynamic performance of a grid connected fixed speed wind farm using a variable speed wind system	[92] Oladimeji J Ayamolowo, Short-term Solar Irradiance Evaluation and Modeling of a Hybrid Distribution Generation System for a typical Nigeria University	[234] Lukman A A., et. al., In-Vehicle Traffic Accident and Road Sides Barrier Detection and Alerting System Using Distance-Time Based Parameters and Radar Range Algorithm	[264] Kufre E. Jack et. al., Development of an IoT-Enabled-Dynamic Master Controller Model for the Integrated Afikpo Metropolitan Power Monitoring and Control System	[240] Samuel F. et. al.-A Mitigation Concept for Energy-Demand Based Carbon Footprint in a University Campus	[59]- Detlef W.- Thermoplastic Insulation System for Power Cables	"Technical Tour #1 ""Microgrids & Farm School"" Presenters: Kanjo Etienne Shey & Ngeh Ernest Bah of TBF Cameroon (30-min)"
	11:45	12:00	00:15	[229] Joseph Kizito B, et. al., Harnessing Renewable Energy Technologies in Un-Electrified Communities in Uganda	[95] Ralf Bucher, Eliminating energy poverty in Africa by integrating top-down and bottom-up electrification concepts, i.e. cross-border backbone networks & solar-hybrids	[245] Khaled Al-Maitah et. al., Wide Area Protection Scheme for Active Distribution Network Aided µPMU	[274] Sudipta Mukherjee et. al., Enhancing Efficiency of PMA Standard Wireless Mobile Charging System in Automobiles by incorporating state-of-the-art Wide Bandgap Switch	[241] Stephen B. et. al.-An Energy Audit Approach Towards Mitigating Power Infrastructural Dearth in Nigeria Universities: ABUAD as a Case Study	[187] - Charles A. - High Power Microstrip Non-Foster Class E GaN HEMT Amplifier	
	12:00	12:15	00:15		[98] Mengesha M W, et. al., Optimal Solar field and Thermal Storage Sizing in Hybrid Solar Biomass Cogeneration Plant	[250] Onyekachi O N., et. al., NATURAL DYE SENSITIZED SOLAR CELL CONVERSION EFFICIENCY ENHANCEMENT: A REVIEW	[284] Milkias B., DC Link Voltage and Power Flow Control of a Doubly Fed Induction Generator in Wind Power System	[246] Dawit G. et. al.-Energy System Modeling Tools: Review and Comparison in the Context of Developing Countries	[263]-Mandoye N.- A Game Theoretic Approach for Automated PID Controller Parameter Tuning	"Technical Tour #2 ""Connectivity & EdEasy Program"" Presenter: Jude Numfor of REI - Cameroon (30-min)"
	12:15	12:30	00:15	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A (Simulive text chat)	Q&A with Technical Tour Presenters
	12:30	12:45	00:15							
	12:45	13:00	00:15	Break						
ISVx Meet the Entrepreneur	13:00	13:45	00:45	"ISVx Meet the Entrepreneurs - Video Award Ceremony $500 Prize Competition Viewing of 5 Short-Form Videos with introductions of the video producers"						
	13:45	14:00	00:15	Q&A ISVx Meet the Entrepreneurs - Host: Mike Wilson						
"Closing PAC 2021"	14:00	14:30	00:30	"Official Conference Closing Announcement of IEEE PES/IAS PowerAfrica 2021 Conference, Nairobi, Kenya (Limo Eliud, General Chair 2020 & 2021) Request-for-Proposals of future 2022 & 2023 IEEE PES/IAS PowerAfrica Conferences (Dr. Henry Louie, Steering Committee Chair)"						
"ISV Session"	14:30	15:30	01:00							"ISV Delegate Networking - FAREWELL ZOOM Open ""Happy Hour"" Discussion Moderator: Mike Wilson "

PowerAfrica Session Links

		Session		Attendee Link:
Day1 - Tuesday, 25 August				
ON-DEMAND	6:00 GMT	Opening Ceremony	ON24	https://event.on24.com/wcc/r/2566572/5368FBCD1F2F2DE3F327D9BDC9636334
ON-DEMAND	6:30-8:00 GMT	Tutorial #1: Entrepreneurship	ON24	https://event.on24.com/wcc/r/2566587/7E56D0FB36C6EBA7F908EE3271564371
ON-DEMAND	6:30-8:30 GMT	Tutorial #2: Safety Through Proper System Ground and Ground Fault Protection	ON24	https://event.on24.com/wcc/r/2566594/A17E2E458E2D76B33DD6C32890CAE7A3
ON-DEMAND	6:30-9:30 GMT	Tutorial #3: Fundamentals of Off-Grid Electricity Access	ON24	https://event.on24.com/wcc/r/2566597/73955D418B7E2AEBBECDEE2157152C45
ON-DEMAND	8:30 - 9:00 GMT	Movie "Film on Safety Awareness"	ON24	https://event.on24.com/wcc/r/2566606/19EC1E781639EB59CF844C07374EC8F4
SIMU-LIVE	6:30-9:30 GMT	PhD Forum Workshop	ON24	https://event.on24.com/wcc/r/2566613/0ADC835FDD7635C41AE66891A1D84A2F
SIMU-LIVE	8:00-9:30 GMT	HAC event 1: Education Session	ON24	https://event.on24.com/wcc/r/2566620/108FABFBD554CA268C464BE20CF721FB
ON-DEMAND	10:00 - 11:00 GMT	Industry Session #1	ON24	https://event.on24.com/wcc/r/2589193/E7E2CC860A81D532C8F09853CB159BA1
ON-DEMAND	11:00 - 12:00 GMT	Industry Session #2	ON24	https://event.on24.com/wcc/r/2589224/E6A54CFCDB682FF1129652CE41B34BD8
ON-DEMAND	12:00 - 1:00 GMT	Industry Session #3	ON24	https://event.on24.com/wcc/r/2589249/398EDCCA0D415151C15FFDF5F4ED23E6
SIMU-LIVE	13:00 - 14:30 GMT	Panel #1: Young Professionals	ON24	https://event.on24.com/wcc/r/2589272/201B6BB5C035B2FC085EF57F1E068B9D
DAY 2 - Wednesday, 26 August				
SIMU-LIVE	6:00 - 7:30 GMT	Post graduate Forum	ON24	https://event.on24.com/wcc/r/2566695/D7D07A16E018EAD50A98178E90EBA773
SIMU-LIVE	8:00 - 11:00 GMT	Plenary Session 1	ON24	https://event.on24.com/wcc/r/2566700/1F5CAF1E8AE341C0079661660A29073A
SIMU-LIVE	11-13:00 GMT	Track 1a: Smart Grid, Microgrid, Metering Design and Cyber Security, FACTS	ON24	https://event.on24.com/wcc/r/2566705/802B6780E12937089E5D1029645B48E6
SIMU-LIVE	11-13:00 GMT	Track 2a: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2566709/5FACFFFA40ED606920FCD802707BA793
SIMU-LIVE	11-13:00 GMT	Track 3a: Electrical Safety, Power System Protection & Standards	ON24	https://event.on24.com/wcc/r/2566725/6C8D40ADEC8A3B24C3542ECEAA3FECAB
SIMU-LIVE	11-13:00 GMT	Track 4a: Power Converter Topologies, Modulaton and Control	ON24	https://event.on24.com/wcc/r/2566735/7A4B792A6ACB17B75DC1C2CCA532D80E
SIMU-LIVE	11-13:00 GMT	Track 5a: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	ON24	https://event.on24.com/wcc/r/2566739/B1EA505DEDC946FFD2882348F85E9FDA
SIMU-LIVE	11-13:00 GMT	Track 6a: Electric Machines, Drive Systems and Topologies	ON24	https://event.on24.com/wcc/r/2566747/0DA2442CF767FE5770948CBD7A939072
SIMU-LIVE	11-13:00 GMT	Smart Village Session 1	ON24	https://event.on24.com/wcc/r/2566754/63ABED117EC29DE97B3246D9759B1781
SIMU-LIVE	13:00 - 15:00 GMT	Panel #2: "Women in Power as Drivers of Social and Economic Transformation"	ON24	https://event.on24.com/wcc/r/2566760/EF07A6CFC92D449164F72DEDE6ABA1A9
SIMU-LIVE	13:15 - 16:15 GMT	Plenary Session 2	ON24	https://event.on24.com/wcc/r/2566781/69ACBC4F202F2D65F878F6EDEF103A8E

Day 3 - Thursday, 27 August				
SIMU-LIVE	6:00 - 8:15 GMT	Track 1b: Smart Grid, Microgrid, Metering Design and Cyber Security, FACTS	ON24	https://event.on24.com/wcc/r/2566800/6D19B69FF507F629C24642DCFA52C401
SIMU-LIVE	6:00 - 8:15 GMT	Track 2b: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2566806/EC12262BD9DDAAB3AB75E26238BC5CEB
SIMU-LIVE	6:00 - 8:15 GMT	Track 3b: Electrical Safety, Power System Protection & Standards	ON24	https://event.on24.com/wcc/r/2566845/84306641DE7C386F5D857F2759B77C03F
SIMU-LIVE	6:00 - 8:15 GMT	Track 4b: Power Converter Topologies, Modulaton and Control	ON24	https://event.on24.com/wcc/r/2566872/315BE241A34C0BFAA0A4421642A341CD
SIMU-LIVE	6:00 - 8:15 GMT	Track 5b1: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	ON24	https://event.on24.com/wcc/r/2566877/8082184F47E84273E446A4A79D30049B
SIMU-LIVE	6:00 - 8:15 GMT	Track 5b2: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	ON24	https://event.on24.com/wcc/r/2566884/25097E7E907214537A13410AB391E621
SIMU-LIVE	6:00 - 8:45 GMT	Smart Village Session 2	ON24	https://event.on24.com/wcc/r/2566892/4160744A588E5B41309159A61E1D6286
SIMU-LIVE	9:00 - 10:30 GMT	Plenary Session 3	ON24	https://event.on24.com/wcc/r/2572286/7CA27E601243AF45D00A50E127ED71C0
SIMU-LIVE	11:00 - 3:15 GMT	Track 1c: Smart Grid, Microgrid, Metering Design and Cyber Security, FACTS	ON24	https://event.on24.com/wcc/r/2572259/7AE6D1F4C99F46AAFFFD7C5A2552B8F5
SIMU-LIVE	11:00 - 3:15 GMT	Track 2c1: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2572262/BDE14EA93068282A7A61F74820E0F85B
SIMU-LIVE	11:00 - 3:15 GMT	Track 2c2: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2572266/4DDA24A748B809469638F03EEA2070D6
SIMU-LIVE	11:00 - 3:15 GMT	Track 3c: Electrical Safety, Power System Protection & Standards	ON24	https://event.on24.com/wcc/r/2572267/A57CB98F3289344C3E78BE79C8111646
SIMU-LIVE	11:00 - 3:15 GMT	Track 5c1: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	ON24	https://event.on24.com/wcc/r/2572268/76FC602DFF7305A5A1854E06EA6F580B
SIMU-LIVE	11:00 - 3:15 GMT	Track 5c2: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	ON24	https://event.on24.com/wcc/r/2572277/A26BE56CBE79EF636705704A5265325F
SIMU-LIVE	11:00 - 3:15 GMT	Smart Village Session 3	ON24	https://event.on24.com/wcc/r/2572279/D0DFBE58CA5A987FAACA416E263DAB46
SIMU-LIVE	13:30 - 15:00 GMT	Panel 3: Electrical & Safety Standard	ON24	https://event.on24.com/wcc/r/2572284/534DA3162FEF9682B94DFDE0BF4D1DF7
SIMU-LIVE	15:30 - 17:00 GMT	Plenary Session 4	ON24	https://event.on24.com/wcc/r/2572286/7CA27E601243AF45D00A50E127ED71C0
SIMU-LIVE	16:30 - 18:00 GMT	Smart Village Session 4	ON24	https://event.on24.com/wcc/r/2572290/BA4BCE2C8C755E7BFE93280661DD7304

Day 4 - Friday, 28 August

SIMU-LIVE	6:00 - 8:15 GMT	Track 1d: Smart Grid, Microgrid, Metering Design and Cyber Security, FACTS	ON24	https://event.on24.com/wcc/r/2572294/A600116CDF478AF2629D9D59819DADDE
SIMU-LIVE	6:00 - 8:15 GMT	Track 2d1: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2572298/FA6C6E6649A2EEF1DC2678C5EE40D722
SIMU-LIVE	6:00 - 8:15 GMT	Track 2d2: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2572302/85919382ABD5C095684C8A7092946245
SIMU-LIVE	6:00 - 8:15 GMT	Track 2d3: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2572303/9A34295AB01D46FC8BCF2064E5332824
SIMU-LIVE	6:00 - 8:15 GMT	Track 5d1: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	ON24	https://event.on24.com/wcc/r/2572305/914B383829B4FCE06729332C8D97FF27
SIMU-LIVE	6:00 - 8:15 GMT	Track 5d2: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	ON24	https://event.on24.com/wcc/r/2572310/D409ABAFE66E6926189B71066AFF2D51
SIMU-LIVE	6:00 - 8:15 GMT	Smart Village Session 5	ON24	https://event.on24.com/wcc/r/2589285/B1753E4DCB69DB5AF5B7B4E12BDB0D79
SIMU-LIVE	8:30 - 9:15 GMT	Plenary Session 5	ON24	https://event.on24.com/wcc/r/2572317/122E8C39E6668AB9CD6B96B9964D6B4C
SIMU-LIVE	9:15 - 10:15 GMT	Industry Session 4z	ON24	https://event.on24.com/wcc/r/2586439/C6D3E8CD1A7E951B92D56770B88C8A7B
SIMU-LIVE	8:30 - 10:00 GMT	Smart Village Session 6	ON24	https://event.on24.com/wcc/r/2589288/168187027FABFF5018B298812AFCA79D
SIMU-LIVE	10:30 - 12:45 GMT	Track 2e1: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2572328/DF4830A02773500A33262B4DFABBC42A
SIMU-LIVE	10:30 - 12:45 GMT	Track 2e2: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2572332/45C2811182A193D050D388FF96EEBB44
SIMU-LIVE	10:30 - 12:45 GMT	Track 2e3: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2572337/9CE8BB6ABBF444BB0E1F112B42706C20
SIMU-LIVE	10:30 - 12:45 GMT	Track 2e4: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation	ON24	https://event.on24.com/wcc/r/2572412/0F30ADD80F2B621FE49A5C9A19BA4102
SIMU-LIVE	10:30 - 12:45 GMT	Track 5e1: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	ON24	https://event.on24.com/wcc/r/2572425/615CA572151F95B652DB13B8EFC486F4
SIMU-LIVE	10:30 - 12:45 GMT	Track 5e2: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education	ON24	https://event.on24.com/wcc/r/2572443/5248817D12180B4874872E0B2163C414
SIMU-LIVE	10:30 - 12:45 GMT	Smart Village Session 7	ON24	https://event.on24.com/wcc/r/2572448/D848B077A54924AA6560DFF156425143
ON-DEMAND	14:00 - 14:30 GMT	Closing Ceremony	ON24	https://event.on24.com/wcc/r/2572474/2B0FF7A8216ADBB16ADB22DB58957429
ON-DMEAND		Omicron	ON24	https://event.on24.com/wcc/r/2602776/17C27C60AB041B5664883F5C0BD9E078
ON-DMEAND		Amotech Africa and Elspec Ltd	ON24	https://event.on24.com/wcc/r/2602802/6AC114D5A01B5FEFB24EC4E3B3DCC309

ORGANISING COMMITTEE

Conference Chairs
General Chair - Engr. Eliud Limo, Kenya Power, Kenya
General Co-Chair - Humphrey Muhindi SMIEEE, SEACOM, Kenya
General Co-Chair Advisory - Engr. Tunde Salihu, Nigeria
Honorary Chair - Prof. Izael da Silva, Strathmore University, Kenya

Finance Committee
Finance Chair - Timothy Gitau, Kenya

Secretariat
Secretary - Gideon Gutu, Kenya
Administrative Assistant - Vannessa Kawira, Kenya

Local Organising Committee
Chair Mercy Koech, Smart Village, Kenya
LOC Advisory - Engr. Abdullateef Aliyu, Phase 3 Telecom, Nigeria

Technical Program Committee
TPC Chair - Dr. Kennedy Aganah, Maxar, Palo Alto CA, USA
TPC Co-Chair - G.Engr Benson Ojwang, University of Nairobi, Kenya

Industry Engagement Committee
Chair - Lavender Ndunya, BAT, Kenya
Partnerships Co-Chair - Gerald Kiplagat, Kenya
Exhibition Co-Chair - Kithinji Muriungi, Kenya
Exhibition Co-Chair - Paul Kanja, Kenya
Exhibition Co-Chair - Ignatius Maranga, Strathmore Energy Research Centre, Kenya

Registration Committee
Co-Chair - Joy Atieno, Kenya
Co-Chair - Sally Musonye, Kenya Power, Kenya

Publicity Committee
Chair - Alex Watila, Kenya
Webmaster - Kennedy Makau, PowerGen Renewable Energy, Kenya
Social Media - Chaltu Marta, Kenya

International Advisory Committee

Dr. Urenna Onyewuchi, PES-USA, Anneru Solutions Incorporated, USA
Dr. Avoki M. Omekanda, IAS-USA, General Motors, USA
Engr. John Nelson, IAS-USA, NEI Engineering Inc., USA
Prof. Mohamed Habib Kammoun, University of Sfax, Tunisia
Prof. Irene S. Fahim, Nile University, Egypt
Prof. Paul Olamba, Université de Kinshasa, DR Congo
Dr. Barry Rawn, Carnegie Mellon University Africa, Kigali, Rwanda
Dr. Abraham Gebregergis, Veoneer, USA
Dr. Bruno Lequesne, E-Motors Consulting, LLC, USA

PES/IAS Power Africa Steering Committee

Chair - Henry Louie
Vice-Chair - Wei-Jen Lee
Member - Kingsford Joseph Atanga
Member - Robin Podmore
Member - Sydney Zimba
Member - Samatha Niyoyita
Member - Dr. Ibrahim Helal

PES Executive Office Staff

Executive Director - Pat Ryan
PES Program Director - Dan Toland
Sr. Administrator – PES Meeting Services - Roseanne Jones

Tutorial
Speakers

TUTORIAL 1: ENTREPRENEURSHIP WORKSHOP

Date: 25 August 2020 | Time: 06:30 – 08:00 GMT

ABSTRACT:

- o Overview of the Tutorial Entrepreneurship Workshop we will present in person to be conducted at the PowerAfrica 2021 – a teaser for the topics and processes we use in a 5-day workshop
- o Intellectual Property in East Africa
- o How to Bootstrap a Company
- o Intro to Business Models

BIOS

Dr Surya Raghu obtained his Ph.D. in mechanical engineering from Yale University and is the Founder and President of a high-tech company – Advanced Fluidics, LLC 2001, and Founding Partner & Co-Director of a non-profit company – ET Cube International, Inc. since 2013. His earlier affiliations were with Yale University, Technical University of Berlin, SUNY Stony Brook, and Bowles Fluidics Corporation.

Dr. Raghu has inventions related to aerospace, automotive, consumer, and biotechnology applications and has been awarded 15 US patents and has over 10 pending patents/ invention disclosures as an inventor or co-inventor.

Mercy Kyomugasho Kainobwisho is currently the Director of Intellectual Property, having successfully served as the Director of Business Registration at Uganda Registration Services Bureau (URSB.) She has previously worked as a Manager of Intellectual Property at URSB, a State Attorney with Ministry of Justice and Constitutional Affairs, and a Legal Assistant in charge of Intellectual Property and Commercial Transactions at Shonubi Musoke & Co Advocates.

She has extensive experience in business, company and intellectual property laws and practice in Uganda and has participated in the development and reviewing of laws relating to intellectual property, business registration, and company incorporation.

Samantha Snabes a Co-founder and a Catalyst for re:3D where she facilitates connections between others printing at the human-scale and/or using recycled materials to access locally-driven manufacturing in 53 countries. Previously, she served as the Social Entrepreneur in Residence for the NASA HQ and Deputy Strategist supporting the NASA Johnson Space Center's Space Life Sciences Directorate after selling a start-up for a DARPA-funded, co-patented tissue culture device.

Samantha holds a BS in Biology, BA degrees in International Relations and Hispanic Studies, an MBA with concentrations in Supply Chain Management and International Relations, and certifications as a firefighter & EMT-B.

Ken Stauffer 2020 Chair, IEEE Enterpreneurship and the Chair of the Vaughn College Board of Trustees in NYC.
Ken has spent 30+ years in the telecommunications industry. He began his career at AT&T Bell Laboratories in Holmdel, NJ. Ken left AT&T in 2000 to co-found EPIK Communications and served as EPIK's Senior Vice President of Operations and Chief Technology Officer. He went on to found Technology Assurance Labs, Cypress Equipment and the IEEE Entrepreneurship Initiative in 2015. Ken was born and raised in Tanzania, East Africa and is a Life Senior Member of IEEE.

TUTORIAL 2: SAFETY THROUGH PROPER SYSTEM GROUND AND GROUND FAULT PROTECTION

Date: 25 August 2020 | Time: 06:30 – 08:30 GMT

ABSTRACT:

The Tutorial on "Safety Through Proper System Grounding and Ground Fault Protection" is intended for the practicing electric power engineer whether a recent graduate or a "seasoned" engineer. The tutorial will begin with a brief discussion on electrical safety and ground faults. The term system grounding should not be confused with the requirements for equipment grounding. The fundamentals of system grounding will be covered which will include solidly, ungrounded and impedance grounded systems.

The use of symmetrical components will be briefly discussed as a tool for better understanding ground fault currents and ground fault protection. A discussion will be held on generator and motor protection which is a little more complex that standard feeder protection. Part of the tutorial will cover the complex HIZ (High Impedance) fault detection. Finally, a brief discussion will be held concerning the application of surge arresters and power cables based on the type of system grounding used.

John P. Nelson graduated from the University of Illinois Champaign-Urbana, in 1970, with a Bachelor of Science in Electrical Engineering, and a Master of Science in Electrical Engineering, from the University of Colorado Boulder, in 1975. He performed post graduate studies in business administration from 1975-1979. Prior to his retirement, Mr. Nelson held positions with Public Service Company of Colorado, from 1969-1979, Power Line Models, from 1979-1984 and NEI Electric Power Engineering from 1984-2014. In December 2014, Mr. Nelson retired as the CEO and a principle engineer of NEI Electric Power Engineering which he founded in 1984.

Mr. Nelson has also been active in the IAS Petroleum and Chemical Industry Committee since 1980 where he received the Russel W. Mills award for outstanding contributions to PCIC. Mr. Nelson was elevated to IEEE Fellow in 1999 and is the recipient of the 2012 Harold Kaufman award. Mr. Nelson is a registered professional engineer in the state of Colorado, as well as eight other states. Mr. Nelson was recently appointed as the IEEE Smart Village – Next Generation (ISVx) Chair.

TUTORIAL 3: FUNDAMENTALS OF OFF-GRID ELECTRICITY ACCESS

Date: 25 August 2020 | Time: 06:30 – 09:30 GMT

ABSTRACT:

This three-hour tutorial covers the contextual, technical, and practical implementation aspects of off-grid electrical systems in developing countries. These off-grid systems include mini-grids, micro-grids, energy kiosks, solar home systems and solar lanterns. System architectures and components, including small-scale solar, wind, hydro, biomass and conventional generation sets, batteries and converters are covered. The mini/micro-grid design process is discussed. Pre-implementation best practices, including site assessment and considerations for business model development are discussed. The instructor draws upon his firsthand experience and contemporary research to provide attendees with the foundational knowledge needed to implement or study off-grid systems.

Dr. Henry Louie received his B.S.E.E. degree from Kettering University in 2002, his M.S. degree from the University of Illinois at Urbana-Champaign in 2004 and his PhD in Electrical Engineering from the University of Washington in 2008. He is a Professor in the Department of Electrical and Computer Engineering at Seattle University. In 2015 Dr. Louie was Fulbright Scholar to Copperbelt University in Kitwe, Zambia. He is the President and Co-founder of KiloWatts for Humanity, a non-profit organization providing off-grid electricity access and business opportunities in sub-Saharan Africa.

Dr. Louie is an Associate Editor for Energy for Sustainable Development and is a founding member of the IEEE PES Working Group on Sustainable Energy Systems for Developing Communities. Dr. Louie is recognized as an IEEE Distinguished Lecturer for his expertise on energy poverty. He is a Senior Member of the IEEE and the Chair of the IEEE PES/IAS PowerAfrica Steering Committee. He previously served as Vice President of Membership and Image of the IEEE Power and Energy Society.

IEEE HAC EDUCATION TRAINING

TOPIC: PES PROJECT DESIGN: CONSIDERING HUMANITARIAN TECHNOLOGY AND SUSTAINABLE DEVELOPMENT

Date: 25 August 2020 | Time: 08:00 – 09:30 GMT

ABSTRACT:

In this training session, the participants are expected to learn:

a) fundamentals of PES project design from humanitarian technology and sustainable development perspectives,
b) importance of local community and stakeholder's engagement
c) necessity of appropriate technology and multi-disciplinary skills during PES project design,
d) social impact analysis of a PES project: understanding output, outcome and impact.

Dr. Shaikh Fattah received a Ph.D. degree in ECE from Concordia University, Canada and later he was a visiting Postdoc at Princeton University, New Jersey, USA. He received B.Sc. and M.Sc. degrees from BUET, Bangladesh, where he is currently serving as Professor, Department of EEE and Director, INPE.

He is the Education Chair of IEEE Humanitarian Activity Committee (HAC) (2018-2020), Chair of IEEE PES-HAC, and committee member of IEEE Smart Village Education. Under his leadership five online modules were created and placed in IEEE learning network and he himself conducted many training/workshops on these topics in nine different countries, which impacted more than 3000 volunteers.

AFRICA
EXECUTIVE FORUM

Date: 25th August 2020 | Time: 1430-1600 GMT

TOPIC 1: FINANCING TRANSMISSION NETWORKS IN AFRICA

Key highlights

Transmission is Key for major power system development

Major technological and market disruptions are changing in an unprecedented way the power sector landscape and generating new business models-technologies such as battery storage and distributed generation that are diminishing the reliance on mainstream electricity transmission. This being said, there are still significant investment needs in transmission both within and between countries to expand their transmission networks. Achieving this requires sizeable investments that cannot always be covered by the public sector to enable large-scale low-cost generation to supply load centres to reduce tariffs by connecting multiple generators, while providing at the same time network resilience as installed generation increases with the economy.

Leveraging private sector for Electricity Transmission financing

Private sector participation to transmission can allow countries to tap into new sources of funding through project finance structures.

TOPIC 2: ENERGY TRANSITION IN AFRICA

Key highlights

There is an opportunity for Africa: to do it right in terms of energy. In order to do that we need to invest in our people by training them on sustainability. This is mostly achieved through energy transition.

One example of this transition is the Electric Vehicle which will in the next 30 years totally replace the internal combustion engines.

The second revolution is moving from public owned monopolies building large power stations to decentralized energy systems (DES) mostly owned by the private sector offering a much better quality of energy at a more affordable price. Please note that this could mean the end of utilities as we know them today. DES makes for no transmission or distribution lines. You produce your electricity in the same spot where you consume it.

The third one is moving from a "dummy" electricity sector with very little freedom to consumers and to service providers to a completely paradigm shift where almost all things are possible given the use of AI, Smart Grid, Smart metering, 5G speed, maintenance by robots, etc.

MODERATORS

Panos Vlahakis is Senior Operations Officer, Upstream, IFC, Istanbul, Turkey. He has has over 35 years of energy sector experience in the electricity transmission and distribution sector. His technical expertise covers setting up master plans, technical specifications, designing standards and guidelines, power system planning and analysis, utility billing systems, SCADA systems, loss reduction and system optimization, project management, utility management, bidding document preparation for transmission and distribution projects, rehabilitation of power systems for mass transit systems.

Since 2013 he is with the International Finance Corporation (IFC) – the private sector arm of the World Bank group as a senior energy sector specialist.

Prof. Izael Pereira Da Silva has a PhD in Power Systems Engineering from the University of Sao Paulo (Brazil). He is also a Certified Energy Manager (CEM). At present he is a Professor at Strathmore University and the Deputy Vice Chancellor – Research and Innovation. He is the Director of the Strathmore Energy Research Centre, SERC.

The centre does training, research, testing and consultancy in energy related topics. His topics of interest are: Rural Electrification, Renewable Energy, Energy Efficiency, Energy Policy, Sustainable Environment and Demand Side Management.

Naresh Mehta first joined Bamburi Cement in 1976 as a Graduate Trainee in Electrical Department and worked with shift electricians moving into various departments. He later joined technical & industrial representation ltd where he started the panel building activity of the company with a staff of 20, to manufacture GEC English Electric fuse switchboards, motor control panels using telemecanique control gears, successfully completed several prestigious projects within five years of employment, some of which included: - Kenyatta National Hospital, Kenya Navy, Reinsurance Plaza, Leyland Motor Vehicle Assembly, District Hospitals. In 1982 he became the managing director Power Technics Ltd. Over the years the company has excelled in its core activities of Electrical Engineering technology and superior sheet metal engineering, with the use of CNC Technology. He is the Chairman of Schneider Electric Kenya Limited and also a managing director at the Prisma Technics Ltd.

Beatrice Muthoni currently a Business Development Manager at InfraCo Africa sources, analyses and executes infrastructure projects to bring them to financial close. She has over 13 years' experience developing and operating power infrastructure projects across Africa. Prior to joining InfraCo, Beatrice worked at KTDA-Power company where she oversaw the development and construction of renewable energy projects focusing on hydro and solar PV to power tea factories and the grid. Beatrice has also worked for Lafarge-Holcim and Schneider Electric where she led teams in the construction of several infrastructure projects as the head of engineering and automation.

Beatrice holds an MBA (Strategic Management) from U.S.I.U and a Bachelor's degree in Electrical Engineering from J.K.U.A.T.

Eng. Dr. Mackay Okure is the Interim Executive Director of the East African Centre of Excellence for Renewable Energy and Energy Efficiency (EACREEE) which is an intergovernmental institution established by the East African Community, with support from the Austrian Development Agency and the United Nations Industrial Development Organisation, to spearhead the promotion of renewable energy and energy efficiency interventions in the region. Eng. Dr. Mackay Okure is also an Associate Professor in the Department of Mechanical Engineering, School of Engineering, College of Engineering, Design, Art and Technology (CEDAT), Makerere University.

He is a registered engineer in Uganda and a member of the American Society of Mechanical Engineers. He holds a BSc in Engineering from Makerere University, an MSc in Mechanical Engineering from the Middle East Technical University, Ankara, Turkey and a PhD in Mechanical Engineering from North-western University, Evanston, USA.

Jean Madzongwe is a Transaction Advisor at the Southern African Power Pool (SAPP) with responsibilities for developing regional generation and transmission projects in the SADC Region. She has several years of experience providing technical advise and transaction support in the energy sector.

Eng. Johnson P. Ole Nchoe was the Managing Director and CEO of the Geothermal Development Company.

Eng. Ole Nchoe served as the Chief Manager, IT and Telecommunications at the Kenya Power Company for over 25 years until 2013. Prior to joining GDC, he had just concluded a two-year tour of duty at the Liberia Electricity Corporation (LEC) where he served as a Director. Together with a team of consultants working in a donor-funded programme geared towards re-building the electricity network in Liberia, he made a great contribution in helping the Liberian company establish robust systems.

Eng. Ole Nchoe is a registered engineer and has 30 years of leadership and management experience. He holds a Master in Business Administration (MBA) and a BSc (Eng, Electrical) both from the University of Nairobi.

Dr. (Eng.) John M. Mativo is a Registered Engineer (ERB) and a Corporate Member of the Institution of Engineers of Kenya. He has more than twenty (20) years cumulative working experience in both the public and private sector accumulating extensive experience in research, design, construction supervision and contract management. He holds a PhD. Degree in Civil Engineering from Tokyo Metropolitan University in Japan (2007).

Currently he works as the Ag. General Manager Project Development Services in the Kenya Electricity Transmission Company (KETRACO), and he is responsible for formulating new high voltage transmission infrastructure and carrying our Monitoring & Evaluation of ongoing and completed projects. He also chairs the PPP Project Appraisal Team at Ketraco that is spread heading the implementation of new project using alternative funding. John Mativo has been involved in the planning, design and construction of 4,800km of high voltage transmission lines, 48 new substations and extension of 28 existing substations. The projects include the transmission regional interconnectors to Ethiopia, Tanzania and Uganda.

Stephen Dihwa has over 30 years of experience in the power sector covering power system operations, transmission Substation and line maintenance, power system analysis, load forecasting, generation expansion Planning, transmission & distribution planning, protection system design and settings, transmission pricing, project management, renewable energy integration, power pool operations and strategic business planning. Participation in various regional projects some of them as Team Leader in the Southern African Power Pool (SAPP) including system stability studies and transmission pricing studies. Since end of 2017 have been Executive Director of the Southern African Power Pool Coordination Centre based in Harare, Zimbabwe covering the 12 mainland SADC states power sector. The role covers regional coordination of power system planning, operations, environmental management and electricity trading. Professionally a Registered Professional Engineer under the Zimbabwe Engineering Council; Fellow of the Zimbabwe Institution of Engineers (FZweIE); Member of the USA-based Institute of Electrical and Electronics Engineers (MIEEE); Member of the UK-based Institution of Engineering & Technology (MIET) and Registered as Chartered Engineer (C.Eng.) with the U.K. Engineering Council. Academically a holder of M.Sc. in Electrical Power Engineering from the University of Manchester Institute of Science and Technology, UK; B.Sc. Engineering Honours in Electrical Engineering from the University of Zimbabwe and Diploma in Management from the Institute of Supervision & Management, UK.

George Aluru is a dedicated professional in the field of electricity supply working in the field for over 10 years and currently leading in the development of wind and solar projects in Kenya.

George serves as the Managing Director of SOWITEC Kenya Limited, a leading global developer of grid-scale Wind and Solar power projects headquartered in Germany and active in 14 countries, and partially owned by Vestas. From the Kenyan office George also oversees the company's activities in Zambia and Zimbabwe.

Additionally, George currently serves as a Vice-Chair in the Kenya Private Sector Alliance's Energy and Extractives sector board, as well as being a founder board member of the Electricity Sector Association of Kenya; business membership organizations that look to improve the business environment in the country.

George holds an MBA (University of Nicosia), M.Sc. Renewable Energy (University of Oldenburg), and a BSc. Telecommunications Engineering (JKUAT). He is currently writing his doctorate on 'Investigating the use of short-term electricity trading to encourage variable renewable energy development in the Eastern African electricity market'.

George is a member of the Power and Energy Society of the IEEE with a special interest in electricity markets and a passion for encouraging the cooperation of players in the electricity sector to better the sector for the consumers and investors.

Eng. Isaac Kiva is the Secretary for Renewable Energy at the Ministry of Energy. He heads the Directorate charged with policy formulation, and promotion of development and utilization of renewable energy, including facilitation of private sector investment.
Eng. Kiva has wide experience in public sector management, having worked in energy and senior Government positions for over 20 years. He is a registered Professional Engineer with Engineer's Board of Kenya, a corporate member of the Institution of Engineers of Kenya and a Gold member of the Association of Energy Professionals East Africa. He is a board member of the Kenya Power and Lighting Company Limited.

Industry Sessions

INDUSTRY SESSION 1: CASE STUDY ON MODEL BASED TESTING BROUGHT TO YOU BY OMICRON

Date: 25th August 2020 | Time: 10:00 – 11:00 GMT

BIO:

Fadi Zatari graduated in 2009 from BAU in Electrical Power Engineering, Amman-Jordan. He has 11 years of experience in Cables Manufacturing, Renewable energy, Power System Protection Testing and Sales. He joined OMICRON in 2015 as an application engineer then became a Regional Application Specialist in 2017. Starting from 2019, he moved to sales as an Area Sales Manager.

ABSTRACT:

Due to the increasing use of numerical relays, with various mathematical algorithms, configurations, parameters and the increase in complexity of power systems, conventional techniques are inadequate to test protection systems.

Testing individual relays in a power system is insufficient to cover all possible errors that might occur. This was underlined in the 2013 NERC maloperations report which stated, "Today's protections systems, relay failures are not the single source of error anymore, but rather incorrect settings, logic and design errors already account for more maloperations."

INDUSTRY SESSION 2: NON-INTRUSIVE CONDITION ASSESSMENT OF HIGH VOLTAGE CIRCUIT BREAKER CONTACTS USING DRM BROUGHT TO YOU BY OMICRON

Date: 25th August 2020 | Time: 11:00 – 12:00 GMT

BIO:

Aditya Taneja started working at OMICRON in 2012 as a Regional Application Specialist with a focus on circuit breakers and switchgears. He is an OMICRON Academy trainer, and delivers courses in OMICRON's training centres and at customers' premises.
He has over 9 years of experience in the electrical field in South Asian and Middle Eastern markets

ABSTRACT:

For reliable operation of circuit breaker under load conditions, wear and tear of main and arcing contacts should be assessed during routine maintenance. This is can be done efficiently using dynamic resistance measurement without opening the interrupter chamber. This presentation will discuss the measurement principal and case study demonstrating usefulness of this measurement technique.

INDUSTRY SESSION 3: DIAGNOSTIC AND FAULT LOCATION ON ONLOAD TAP CHANGERS – CASE STUDIES. BROUGHT TO YOU BY OMICRON

Date: 25th August 2020 | Time: 12:00 – 13:00 GMT

BIO:

Sofiane Bakkay joined OMICRON electronics Middle East in January 2020 as the Regional Application Specialist for power transformers.

Sofiane holds a degree in electrical engineering and has over 20 years of experience in the field. He was previously working as the Head of Test and Measurement Division in STEG – Tunisia

ABSTRACT:

Onload tap changers (OLTCs) are one of the most indispensable components on regulated Power Transformers. Due to their 'Dynamic' operation, OLTCs are very exposed to faults and degradation. Different statistics studies on Power transformers faults location, shows that OLTCs are the most affected component by failures.

Different electrical test could be performed on Power Transformers to assess the health of OLTCs and to locate any eventual fault. Basic tests like Turn ratio and static DC Winding resistance, as well as DRM scanning (Dynamic Resistance Measurement), combined to Oil analysis (Physical-Chemical tests and DGA) could give precious information to locate the different faults (mechanical or electrical fault) on OLTCs.

INDUSTRY SESSION 4: THE INFLUENCE OF PHOTOVOLTAIC SYSTEMS ON POWER QUALITY BROUGHT TO YOU BY AMOTECH AFRICA AND ELSPEC LTD

Date: 28th August 2020 | Time: 09:15 – 10:15 GMT

BIO:

Njeri Gachanja, Key Account Manager, AMOTECH AFRICA
A BSc Electrical Engineering graduate currently undertaking an MBA at Strathmore Business School, Nairobi, Kenya. She is an experienced Key Account Manager with a demonstrated history of working in the electrical and electronic manufacturing industry with a special focus on Power Quality. A strong sales professional, skilled in Strategic Planning and Pre-Sales Technical Consulting

ABSTRACT:

The influence of photovoltaics Systems on Power Quality as there are more and more Wind Turbine and Photo Voltaic manufacturers for energy producing farms worldwide, there is a growing need for continuous power quality monitoring at the Point of Common

Coupling (PCC). Monitoring PQ has technical, economical, and legal implications. Electrical parameters fluctuate continuously and depend on many factors such as wind and sun. Installing Continuous, high resolution recording and monitoring devices in PCC location enables the utility and/or the farm operators to ensure compliance with the grid requirements. Experience shows us that many power quality events that are within the permitted range, can still be a source of problem to the energy producers and consumers which many times are a source for power quality investigation and thorough post event analysis. In our presentation we will show a few examples of data recorded by a continuous high-resolution PQA at a PCC location in Photovoltaic Farms. These measurements show anomalies that are still within the standards but thanks to the continuous waveform recording function, these occurrences can be observed.

BIO:

Asaf Laifer, Metering & Protection Division Manager, Elspec Ltd
Experienced Division Manager with a demonstrated history of working in the electrical and electronic manufacturing industry. Skilled in Market Requirements Documents, Negotiation, Product Lifecycle Management, Smart Grid, and Software Requirements. Strong sales professional with a Professional Product Management Course focused in Hi-Tech from Bar-Ilan University.

Panels

PANEL 1: YOUTHS PROVIDING HOPE TO POWER THE FUTURE OF AFRICA

Date: 25th August 2020 | Time: 13:00 – 14:30 GMT

MODERATORS Abdullateef Aliyu

Abdullateef Aliyu has over 15 years' experience working in the information and communication technology (ICT) / Telecommunication industry focusing on providing broadband services to the urban and rural areas in Nigeria and across West Africa; he heads the infrastructure roll-out and deployment department in Phase 3 telecom. He has keen interest on renewable energy and humanitarian projects.

He is Senior Member of IEEE and an active volunteer of the Institute for more than a decade. He Chaired the Local organizing committee for Power Africa 2019, In Abuja Nigeria. Abdul is an Industry Ambassador, member of the IEEE Region 8 young professional Subcommittee,, member region 8 Humanitarian Subcommittee and the secretary of IEEE Nigeria Section. He was the past Chair of IEEE Young Professionals AG Nigeria Section 2013-2017. He won the IEEE MGA Young Professional Achievement award for 2019.

Abdullateef is an Alumni of the United State Telecommunication Institute (USTTI), Washington DC, USA, Member of PMI, ASQ, IEEE, NSE, NIM, and COREN.

PANELISTS

John Hofman is a Substation & Distribution Engineer in Transmission and Distribution Services at Burns and McDonnell in Vancouver, WA. John received his BSEE in 2015 from Washington State University-Vancouver

Sainab Ninalowo is an Engineer in the Capacity Planning group at ComEd. ComEd is an energy delivery subsidiary of Exelon Corporation and one of the largest utilities in the United States, providing service to approximately 3.8 million customers across northern Illinois. Prior to this, she was in the Smart Grid and Technology group which was charged with developing and implementing innovative technologies and business models for advancing the electric grid. Sainab also drives innovation and collaboration at ComEd as ComEd's regional innovation ambassador, and sits on the new idea review board.

Sainab was the FY16 VP of Outreach for the Society of Women Engineers- Chicago Regional Section, where she oversaw the high school, elementary, scholarship, and collegiate outreach programs. Sainab graduated with a Bachelor's of Science in Mechanical Engineering from Bradley University in 2012, and she is currently pursuing an MBA degree in Finance from DePaul University in Chicago. Sainab loves outdoor activities such as hiking, camping and photographing the life around her.

Simay Akar has specialized in the solar and renewable energy industry since 2012. She worked in China and Turkey and mostly focused on international commercial activities including communications, marketing, sales, investment management, and business development. She is currently the Chief Commercial Officer at Innoses -Ruiyi (Shanghai) Renewable Energy Technology Co., Ltd. in the field of energy storage for renewable energy and electric vehicles and she is in charge of global marketing and business development initiatives. She served roles as Sales and Marketing Director at EkoRE Renewable Energy, Business Development and Marketing Director at GoodWe Solar, Head of International Marketing Department at Talesun Solar, Business Development and Sales Manager at CSUN Eurasia, Marketing Communication at Schneider Electric, and Corporate Communication at Arcelik (BEKO). She joined IEEE as a Student Member in 2007, graduated from Middle East Technical University, Ankara Turkey. Today, she is an IEEE Senior Member, IEEE VOLT Graduate (2019), Certified Soft Skills Trainer (since 2008), METU Alumni Association Energy Commission Member, and Licensed Sailor Athlete at the Turkish Sailing Federation.
https://simayakar.com

Samantha Niyoyita is a process engineer in a food processing company, AIF. She is involved in process control, new product development, technology analysis and acts as a coordinator of the energy conservation team. What drives Samantha is knowing that she uses her engineering knowledge to impact positively the lives of Africans by fighting against malnutrition.

The last springs from being an industrial technology engineer with a master's degree in mechatronics and a bachelor's degree in power and control from the Swiss Western University of Applied Sciences. Her experience includes projects involving energy control and automation, analysis and risk assessment in robotics. After returning to Rwanda, her interest in innovation and finding technical solutions led her to attend conferences on technology development. She is now a member of the IEEE Rwanda sub-section.

Sally Musonye is currently an Electrical Engineer at Kenya Power tasked with the supervision of design and construction of power lines up to 33kV. She also leads the last mile connectivity program aimed at increasing power access to the rural communities in Kenya. Sally graduated from the University of Nairobi with a BSC. Degree in Electrical Engineering and has received training and certification on Enterprise Risk Management.

She is a graduate member of the Engineers Board of Kenya and an active professional member of IEEE Kenya section and Power and Energy Society (PES), Kenya. In addition, she holds various leadership roles in IEEE including serving as the founding and past chair of IEEE Women in Engineering Kenya, former University Students' branch chair and member of IEEE Sight Kenya committee. Currently, she volunteers as the IEEEmadC judges lead and a subcommittee YP member for IEEE Africa.

Her previous speaker and panel engagements have been at IEEE WIE International Leadership Conference (USA), IEEE Global summit (Bangalore) and IEEE EASYP (Uganda). She hopes to increasingly engage the sector players to continually address the gender gaps and misconceptions in the sector to drive development across the continent.

Women
in Power

PANEL 2: WOMEN IN POWER

Date: 26th August 2020 | Time: 1330 - 1530 GMT

Topic: Women in Power as Drivers of Social and Economic Transformation

Dr. Ruomei Li, PES WiP Chair
She will Share an overview of the new goals of WiP. Highlight initiatives such as the scholarships for African students and more benefits of WiP. Link this to how WiP is driving transformation through mainstreaming gender in the education sector.

Simay Akar, PES WiP Vice Chair
She will share the WiP vision. Invites more women to celebrate and highlight successful WiP. How is WiP being used as a tool to drive more mentorship opportunities? How is this rising awareness helping more women to discover their talents?

Dr. Xiaoqian Li, Deputy Secretary IEEE PES (WIP) China
"Knowledge is a most important possession that increases when shared." Share the collective effort being taken by the WiP to promote more women in leadership in the workspace. Highlight some of the emulable success stories.

Prof. Saifur Rahman the founding director of the Advanced Research Institute at Virginia Tech, USA Highlights how the Power Energy Society is promoting the Women in Power initiative and its aims to provide women an avenue to fully participate in professional and academic development. Highlight how PES WiP ensures women have a voice in all the major committees including project implementation teams, innovation seminars and workshops and such other relevant forums.

Dr. Noel Schulz, Chair in PAS Science at Washington Store State University

PANEL 2: WOMEN IN POWER

Date: 26th August 2020 | Time: 1330 - 1530 GMT

Topic: Women in Power Breaking the Glass Ceiling

Pre-Recorded Session 2 by Women in Power Regional Representatives

Abstract:

There exists a lot of stereotypes confronting the participation, and leadership of women in engineering disciplines, especially in the power and energy sector. However, some women have found the skills, expertise and wisdom to break through the glass ceilings that exist in the engineering classrooms, industry, and academia. Therefore, they can stand to show young career seekers, early and middle career women the way to the top in engineering. We shall be learning from the experiences of some of such women in this session, thereby, motivating other women in engineering to be the best that they can be, glass-ceilings of stereotypes notwithstanding.

Speaker:

Mercy Chelangat Koech, she serves as the IEEE Smart Village Ambassador, and PES Women in Power Rep. Region 8.

Speaker:

Engr. Maimunah Ogunniyi, currently works with the Transmission Company of Nigeria (TCN) as Assistant Manager in the System Planning and Development Department.

Speaker:

Yasmine Chelly, Computer science and Applied Mathematics engineering student at National Engineering School of Sfax (ENIS)

Speaker:

Dr. Omowunmi Mary Longe, is presently a Senior Lecturer in the department of Electrical and Electronic Engineering Science, University of Johannesburg, South Africa.

Speaker:

Dr. Sandrine Mubenga, PE is Assistant Professor at the Engineering Technology Department at the University of Toledo (UT)

PANEL 3: ELECTRICAL SAFETY & STANDARDS

Date: 27th August 2020 Time: 13:30 - 15:00 GMT

ABSTRACT:

The panel will cover issues at the intersection of electrical safety and standards. The panelists, with diverse experience spanning three continents, will address a number of questions, such as:

1. How do electrical safety and standards relate to one another?
2. What are the electrical safety issues in East Africa, West Africa?
3. How do these issues compare with those in other developing countries, like India?
4. What are the electrical safety issues with micro-grids?
5. Why are standards important for new micro-grids, and for that matter in general?
6. Where are we in Africa in terms of standards?

John P. Nelson graduated from the University of Illinois Champaign-Urbana, in 1970, with a Bachelor of Science in Electrical Engineering, and a Master of Science in Electrical Engineering, from the University of Colorado Boulder, in 1975. He performed post graduate studies in business administration from 1975-1979. Prior to his retirement, Mr. Nelson held positions with Public Service Company of Colorado, from 1969-1979, Power Line Models, from 1979-1984 and NEI Electric Power Engineering from 1984-2014. In December 2014, Mr. Nelson retired as the CEO and a principle engineer of NEI Electric Power Engineering which he founded in 1984. Mr. Nelson has also been active in the IAS Petroleum and Chemical Industry Committee since 1980 where he received the Russel W. Mills award for outstanding contributions to PCIC. Mr. Nelson was elevated to IEEE Fellow in 1999 and is the recipient of the 2012 Harold Kaufman award. Mr. Nelson is a registered professional engineer in the state of Colorado, as well as eight other states. Mr. Nelson was recently appointed as the IEEE Smart Village – Next Generation (ISVx) Chair.

Daleep Mohla, an IEEE Life Fellow, is a Registered Professional Engineer in the State of Texas, USA. He worked for Pullman Consulting, Union Carbide, and Dow for thirty years.

Daleep is very active in IEEE and NFPA standards. He is involved in different capacities in the following:

- Chair of IAS Standards Department
- Member of NFPA 70E Technical Committee for Standard for Electrical safety in the Workplace and National Electrical Code Panel 5 on Grounding and Bonding
- Member of IEEE- Standards Association Standards Board
- Chair IEEE 1584 IEEE Guide for Performing Arc Flash Hazard Calculations sponsored by IAS/ Petroleum and Chemical Industry Committee

Daleep was elevated to IEEE Fellow in 2006 for contributions to electrical safety design concepts to reduce workplace hazards. He received the 2007 IEEE Industrial Applications Society (IAS) Petroleum and Chemical Industry Committee's David Azbill Award and the 2011 IEEE Standards Association Charles Steinmetz award for contributions to the preparation, dissemination, and advocacy of consensus safety standards for operation and maintenance of industrial and commercial power systems to include safety concepts. He was recipient of the Safety Excellence Award of IEEE Petroleum and Chemical Industry Committee in 2014.

Daleep is the Owner and Principal Consulting Engineer for DCM Electrical Consulting Services in Missouri City. Texas His Company provides consulting services in National Electrical Code and NFPA 70E training, preparation and audit of electrical safety programs and facilities, and forensic investigations.

Daryld Ray Crow is presently the owner and Principal Technical Consultant for DRC Consulting Inc. and performs consulting work for electrical safe work practice standards, assessments/audits, electrical safe work practice training and electrical engineering projects. He graduated from the University of Houston in 1969 with a BSEE.

After graduation, Ray went to work for the Aluminum Company of America providing global engineering support on the design, installation, and operation of power and rectifier systems and electrical safety.

He was a team leader for writing multiple Alcoa electrical standards including electrical safe work practice standards and training. Ray was the team leader for providing internal electrical safety audits of Alcoa facilities. After retiring from Alcoa, he worked for Fluor Global Services and Duke Energy as a Principal Technical Specialist providing design and consulting electrical engineering for plant power distribution systems and safe work practice programs, standards, and assessments/audits for facilities.

Ray is a life senior member of IEEE and a principal member of the NFPA 70E technical committee, he is the secretary of IEEE standard P1584.1, secretary and technical editor for IEEE standard P1814, and was the chair of PCIC IEEE standard P463-2019 and secretary of IEEE P1584.

In 2010 Ray received the IEEE/PCIC "Electrical Safety Excellence" award and in 2017 he received the IEEE/ESW "Outstanding Service Award". Ray has Co-authored and presented technical papers and tutorials for a number of IEEE IAS PCIC conferences, IEEE IAS Pulp & Paper conferences, IEEE IAS Electrical Safety Workshop conferences, and the NETA PowerTest conference.

Geisel Custodio graduated from the University of Agostinho Neto-Angola, in 2010, with a Bachelor of Science in Electrical Engineering, and a Master of Science in Power System Control and regulation, from the University of CIPEL - University Jose Antonio Echevarria - CUJAE, Havana-Cuba, in 2017. He performed post graduate studies in Oil and Gas Business Management in 2018. He was electric field engineer in a hydroelectric dam. After that he joined Chevron, working as power system engineer in Malongo - Angola. In 2018, He was elected as Coordinator of Electrotechnical Community of Angolan Engineers Council.

Geisel is the co-owner and Principal Consulting Engineer for ASEP Electrical Consulting Services in Angola. His company provides consulting services in power system network and industrial systems, preparation and audit of electrical safety programs and facilities, and power reliability improvement.

PhD FORUM WORKSHOP

MODERATORS

Dr. Imed Ben Dhaou

Dr. Irene Samy Fahim

PANELISTS

TOPIC: Market Identification and Business Model Decisions

Ken Stauffer was born and raised in Tanzania, East Africa, he is a Life Senior Member of IEEE, and he co-founded the IEEE Entrepreneurship Initiative in 2015. He currently serves as the 2020 Chair of the IEEE Entrepreneurship Steering Committee and the Chair of the Vaughn College Board of Trustees in NYC.

TOPIC: Ethics in Publications

Dr. Ahmed Abdelgawad received his M.S. and a Ph.D. degree in Computer Engineering from University of Louisiana at Lafayette in 2007 and 2011 and subsequently joined IBM as a Design Aids & Automation Engineering Professional at Semiconductor Research and Development Center. In Fall 2012 he joined Central Michigan University as a Computer Engineering Assistant Professor. In Fall 2017, Dr. Abdelgawad was early promoted as a Computer Engineering Associate Professor. He is a senior member of IEEE. His area of expertise is distributed computing for Wireless Sensor Network (WSN), Internet of Things (IoT), Structural Health Monitoring (SHM), data fusion techniques for WSN, low power embedded system, video processing, digital signal processing, Robotics, RFID, Localization, VLSI, and FPGA design. He has published two books and more than 88 articles in related journals and conferences. Dr. Abdelgawad served as a reviewer for several conferences and journals, including IEEE WF-IoT, IEEE ISCAS, IEEE SAS, IEEE IoT Journal, IEEE Communications Magazine, Springer, Elsevier, IEEE Transactions on VLSI, and IEEE Transactions on I&M. He severed in the technical committees of IEEE ISCAS 2007/8 and IEEE ICIP 2009 conferences. He served in the administration committee of IEEE SiPS 2011. He also served in the organizing committee of ICECS2013 and 2015.

TOPIC: IEEE Industry Applications Society for Research Enhancement and Career Development

Prof. Wei-Jen Lee received the B.S. and M.S. degrees from National Taiwan University, Taipei, Taiwan., and the Ph.D. degree from the University of Texas, Arlington, in 1978, 1980, and 1985, respectively, all in Electrical Engineering. In 1986, he joined the University of Texas at Arlington, where he is currently a professor of the Electrical Engineering Department and the director of the Energy Systems Research Center.

He has been involved in the revision of IEEE Std. 141, 339, 551, 739, 1584, and 3002.8 development. He is the President Elect of the IEEE Industry Application Society (IAS) and an editor of IEEE Transactions on Industry Applications and IAS Magazine. He is a member of IEEE Fellow Committee. He is the project manager of IEEE/NFPA Collaboration on Arc Flash Phenomena Research Project.

TOPIC: How to write academic research papers

Irene Samy is an assistant Professor, Industrial and Service Engineering and Management department, Nile University Cairo, Egypt and the American University in Cairo. Her PhD thesis project was developing novel polymer composites membranes for industrial applications such as food packaging. She earned her Master's in Material Science, Mechanical Engineering, and American University in Cairo. The Master's Thesis project was developing natural fiber (rice straw) reinforced composites.

Irene has several scientific publications related to investigation of Natural Fiber Reinforced Polymers, reinforcement of Plastic Waste with Treated Natural Fibers, and characterization of natural polymeric nanocomposites.

TOPIC: Scientific writing for career growth

Olfa Kanoun received the Dipl.-Ing. Diploma from the Technical University in Munich (TUM) and the Dr.-Ing. degree from University of the Bundeswehr München Germany, in 1996 and 2001, respectively. She is a full professor at Chemnitz University of Technology. She initiated the International Workshop on Impedance Spectroscopy (IWIS) in 2008. She is a leading researcher in sensors, measurement systems and measurement methods. She has a deep experience on impedance spectroscopy, energy aware wireless sensors, energy harvesting and flexible sensors based on nanomaterials. Prof. Kanoun has been appointed as a Distinguished IEEE Lecturer. She was a recipient of several research excellence awards and six best papers awards together with her team. Prof. Kanoun supervised more than 25 dissertations successfully. She is the author or co-author of 14 books and more than 100 contributions to scientific journals.

Postgraduate Forum Poster Session:

The following papers were presented.

1. Pauline K.- Embedded power system monitoring of illegal connections in Kenyan domestic supply
2. Bertie J. - An objective review of erection methods for overhead line towers devoid of Ccranes
3. Denis J., et. al. - Progress in grid interconnection in East Africa: Challenges, Experiences and Opportunities
4. Susan K et. al.- Under voltage load shedding using hybrid metaheuristic algorithms for voltage stability enhancement: A review

Keynote Speakers

PLENARY SESSIONS

Keynote Speaker 1

Eng. Martha Cheruto, Deputy CEO,
Kenya Private Sector Alliance (KEPSA)
Topic: Private Sector Role in Driving Demand for Power
Date: Wednesday, 26th August, 2020
Time: 0800 – 0810 GMT

BIO:

Martha Cheruto is the Deputy Chief Executive Officer at the Kenya Private Sector Alliance (KEPSA); the private sector apex body that brings together the business community under a single umbrella to engage and influence public policy for an enabling business environment.
Martha holds a Bachelor of Science degree in Mechanical Engineering from Jomo Kenyatta University of Agriculture and Technology (JKUAT), a diploma in Efficient Energy Use & Planning from Swedish International Development Cooperation Agency (SIDA, Sweden), a Masters in Management & Leadership from Management University of Africa (MUA) and is currently pursuing a PhD in Management & Leadership at MUA. She is a qualified and registered engineer with the Engineers Board of Kenya (EBK) and The Institution of Engineers of Kenya (IEK); a Certified Energy Manager and has pursued several courses, locally and internationally on policy and legislative drafting, renewable energy, strategy development, finance, industrial operations, among others. She is a recipient of the Women in Energy Professional Technical Award, Kenya; Tech Women Emerging Leaders Program 2020/21 and a Finalist for Outstanding Women in Water and Power, South Africa.
Prior to joining KEPSA, Martha worked in Kenya Power and Lighting Company (KPLC) and Kenya Association of Manufacturers (KAM). During her tenure at the organizations, she has supported manufacturers in facilitating a conducive environment for trade, business development and supply efficiency. She has been a speaker and a facilitator in local and global conferences on energy, climate change and private sector development. She is actively involved in mentorship, women empowerment, and community development through her representation as a council member of FGM to STEM; a program under Women in Energy.

ABSTRACT

The private sector plays a pivotal role in the energy space globally through generation, transmission, distribution and retailing power for eventual consumption. In Kenya, the agility and diversity of the power infrastructure provides a good opportunity for expansion, innovation and building of sustainable, redundant networks. "The government goodwill and support gives a good opportunity for investors and industry players to grow the power infrastructure for both demand and supply" – The State of Kenya's Private Sector: Recommendations for Government

Development Report. Government's intention to increase uptake of Public Private Partnerships (PPPs), particularly in large infrastructural projects presents an opportunity for private sector involvement, reduce the fiscal pressure thus allowing government to invest in social goods. For example, the energy sector has been at the forefront in the implementation of the PPPs where various independent Power Producers (IPPs) have been able to bridge the power generation gap. This has seen the country avoid the disruptive power rationing program hence a major boost to businesses.

In this conference, we look forward to sharing opportunities to boost our investment climate and best global practices in policy formulation that will promote innovation around the existing infrastructure as well as looking at the opportunities for grid interconnectivity, hybrid networks, financing and installation of off-grid stations and creation of a friendly regulatory environment for all stakeholders in the energy sector.

Keynote Speaker 2

Prof. Izael da Silva,
DVC - Research and Innovation, Strathmore University
Topic: Universal Access to Electricity in Africa
Date: Wednesday, 26th August, 2020
Time: 0810 – 0840 GMT

BIO:

Prof. Izael Pereira Da Silva has a PhD in Power Systems Engineering from the University of Sao Paulo (Brazil). He is also a Certified Energy Manager (CEM). At present he is a Professor at Strathmore University and the Deputy Vice Chancellor – Research and Innovation. He is the Director of the Strathmore Energy Research Centre, SERC. The centre does training, research, testing and consultancy in energy related topics. His topics of interest are: Rural Electrification, Renewable Energy, Energy Efficiency, Energy Policy, Sustainable Environment and Demand Side Management.

In March 2012 Prof Da Silva together with other partners won a project sponsored by DFID and DANIDA and managed by the World Bank to set up the first Climate Innovation Centre (CIC) in the world. It is housed in Strathmore and serves SMEs financially and technically to solve challenges posed by the adverse impact of climate change either by mitigation or adaptation. Prof Da Silva has written quite extensively in the field of energy.

In 2013 he was honoured by the Brazilian Government with the title of "Comendador da Ordem do Rio Branco" for his services towards education and poverty alleviation in Africa. In October 2014, after more than one year of efforts together with seven other colleagues he managed to get the Association of Energy Engineers – AEE to approve the Association of Energy Professionals (Eastern Africa) as a chapter of AEE for the five countries of East Africa plus Ethiopia and South-Sudan. Prof Da Silva is the first elected President and founding member of the AEP(EA).

ABSTRACT

About 1.1 billion people in the world have no access to electricity. More than half of this number are located in Sub-Saharan Africa.

Except for the oil rich countries in the North and South Africa in the South, practically all other countries in the African continent are electricity deficient.
Out of the five continents Africa is the most affected in this matter. This study hopes to give an overview of the problem and offer some solutions which could eventually see the realization of this Goal by 2030.

Three mega-trends are at work in Africa and we need to consider them as boundary conditions for the above problem. They are: moving from fossil fuel to renewable energy; moving from mostly large, government supported power plants to a mix of those together with mini-grids and off-grid solutions supported by the private sector and finally the urbanization movement which will see 25% of the rural population moving to cities.

Four are the ingredients of the success of this venture: A paradigm shift on the finance of such task which will see all together trying to establish business which will financially sustainable; the government ability to provide transparency and mitigate risks for investors; the concerted effort to get a large amount of people trained such that they can provide support to the sector and finally the digitalization of the electricity industry in a multidisciplinary fashion such that lawyers, IT professionals and business people will join the engineers to craft solutions which are viable in all its aspect.

As a last idea, which is essential part of the feasibility of the above, is what I can "the human factor". No law, statutes or technology by itself can solve this very articulated problem. What is needed are people. Trained, passionate and committed to the common good above self. We have a number of people we can cite as examples: Steve Job, Yunus Mohammed, Bill Clinton, Madre Teresa, etc. Those are people who possessed the three above mentioned features and who relentlessly struggled until they achieved their dream and as a consequence changed the planet. We need a few dozen of them in Africa to bring to everyone the blessing of modern types of energy.

Keynote Speaker 3

Eng. Jared O. Othieno,
CEO, Geothermal Development Company
Topic: Delivering Menengai Phase 1 Geothermal Project through Public Private Partnership
Date: Wednesday, 26th August, 2020
Time: 0840 – 0930 GMT

BIOS

Eng. Jared O. Othieno was appointed as the Geothermal Development Company Managing Director & CEO in April, 2020. He has a wealth of knowledge and vast experience in the energy sector. His background in energy coupled with his leadership skills will ensure that GDC enjoys continued success in its role as a leader in the development of geothermal resources.
Eng Jared has served in various senior roles at Kenya Power & Lighting Company, where he began and grew his career. Most recently, he served as Acting CEO of Kenya Power & Lighting Company.

He is currently studying for a PhD in Strategic Management from the Jomo Kenyatta University of Agriculture and Technology. He also holds a Master of Business Administration (MBA) in Strategic Management and a Bachelor's Degree in Electrical Engineering from the University of Nairobi.

ABSTRACT

This talk will highlight the 105 MW project for Menengai geothermal field being implemented by GDC under a public private partnership (PPP) arrangement.

Keynote Speaker 4

Prof. Wei-Jen Lee,
Professor, University of Texas at Arlington
Topic: Arc Flash Hazard and Electrical Safety, The New Revision of IEEE Std 1584
Date: Wednesday, 26th August, 2020
Time: 1515 – 1545 GMT

BIO:

Professor Lee received the B.S. and M.S. degrees from National Taiwan University, Taipei, Taiwan., and the Ph.D. degree from the University of Texas, Arlington, in 1978, 1980, and 1985, respectively, all in Electrical Engineering.
In 1986, he joined the University of Texas at Arlington, where he is currently a professor of the Electrical Engineering Department and the director of the Energy Systems Research Center.
He has been involved in the revision of IEEE Std. 141, 339, 551, 739, 1584, and 3002.8 development. He is the President Elect of the IEEE Industry Application Society (IAS) and an editor of IEEE Transactions on Industry Applications and IAS Magazine. He is a member of IEEE Fellow Committee. He is the project manager of IEEE/NFPA Collaboration on Arc Flash Phenomena Research Project.
Prof. Lee is a Fellow of IEEE and registered Professional Engineer in the State of Texas.

ABSTRACT

Though electrical incidents represent a relatively small percentage of all work-related incidents, they are disproportionately fatal. In the case of burn injury, it may result in extended hospitalization and rehabilitation. Proper protection is the key to reduce casualties during these incidents. IEEE 1584 and NFPA 70E are developed to protect the safety of the workers.
For better understanding of the arc flash phenomena, the IEEE and the NFPA (National Fire Protection Association) have joined forces on an initiative to fund and support research and testing to improve the understanding of arc flashes. The results of this collaborative project will provide information that will be used to improve electrical safety standards, predict the hazards associated with arcing faults and accompanying arc blasts, and provide practical safeguards for employees in the workplace. The identified areas include but are not limited to: 1) Heat and Thermal Effects, 2) Blast Pressure, 3) Sound, and 4) Light intensity.
This presentation will cover the heat and thermal related arc flash hazards. It will include the basic understanding of the arc flash, performing the arcing current and incident energy estimation, and brief introduction to newly released IEEE Std. 1584 – 2018, IEEE Guide for Performing Arc-Flash Hazard Calculations.

Keynote Speakers 5

Kartik Kulkarni,
Chair, IEEE Humanitarian Activities Committee (HAC
Topic: Updates from the IEEE Humanitarian Activities Committee (HAC)
Date: Wednesday, 26th August, 2020
Time: 1545 – 1615 GMT

BIO:

Kartik Kulkarni is the Chair of the IEEE Humanitarian Activities Committee, the strategic, global arm of the IEEE Board of Directors that manages IEEE's portfolio of programs and multi-million dollar project investments that leverage 400k+ engineers in 160+ countries in applying and advancing technology solutions for sustainable development. In 2019, Kartik has spearheaded social impact measurement of IEEE's sustainable development projects around the world, using the technique of SocialROI. Kartik also heads Oracle's team architecting the Blockchain Transaction Engine; he is a co-inventor on 10+ US Patents, both granted and pending. The DiscoverE Foundation recognized Kartik as a 2015 USA's New Face of Engineering.

John Oyewole Funso-Adebayo,
Chair, Region 8 IEEE Humanitarian Activities Committee (HAC)

BIO:

John Oyewole Funso-Adebayo is the 18th National Chairman of the Nigerian Institute of Electrical and Electronic Engineers (NIEEE), a division of the Nigerian Society of Engineers. His personal goals and interests are in the areas of renewable energy through innovations and infrastructure to sustain cities and communities, globally.

He is an off-grid and mobile broadband subject matter expert for design, implementation and upgrade with expansion opportunities. He delights in producing affordable and sustainable electricity for home-use, as well as designing and installing cheap internet access. He also carries out onsite training in all these. He has a postgraduate degree in Communications and an undergraduate degree in Power systems.

ABSTRACT

Learn more about the IEEE Humanitarian Activities Committee (HAC), its programs, including IEEE SIGHT and this year's HAC/SIGHT COVID-19 grassroots projects, HAC/SIGHT activities in Africa, as well as you can get engaged.

Keynote Speaker 6

Vincent Kaabunga,
Chair, IEEE Africa Council
Topic: IEEE on the March in Africa
Date: Thursday, 27th August, 2020
Time: 0900 – 0930 GMT

BIO

Vincent Kaabunga is a Knowledge Management and Organizational Development Specialist with cross-training in Engineering, Management and M&E. He studied Electrical Engineering at Makerere University and pursued post-graduate studies in Information Technology at the University of Pretoria and Strategic Business Management training at the Strathmore Business School.

Vincent is a Telecommunications Engineer and a Senior Member of the IEEE. He has worked extensively in a professional capacity across Eastern and Southern Africa, and in South East Asia. He has over 20 years of experience in sustainable development and organizational capacity development.

He is a member of the IEEE Communications Society, the IEEE Computer Society, the IEEE Standards Association and IEEE Women in Engineering. He has served as liaison to the IEEE Board of Directors, Chair of the IEEE Kenya Section, and in various regional capacities. He has actively led and supported efforts on the ground that have seen the formation of new IEEE Sections, Student Branches, local Technical Chapters and, most recently, the IEEE Africa Council.

ABSTRACT

The IEEE Africa Council brings together fourteen African Sections and Subsections across Africa to collaborate on joint activities, representing and giving a voice to IEEE members in Africa. The Council was formed in Nov 2018 and its current membership includes Algeria, Botswana, Burkina Faso, Ghana, Kenya, Liberia, Mauritius, Morocco, Nigeria, South Africa, Tanzania, Tunisia, Uganda and Zambia. The presentation will chart the Institute's efforts to expand its presence in the region and the Council's work in supporting IEEE members in Africa and responding to the unmet needs of the African engineering community as a whole.

Keynote Speakers 7

Topic: Assessment Practicum: The Purpose and Practice of Assessment by IEEE Humanitarian Activities Committee (HAC)
Date: Thursday, 27th August, 2020
Time: 0930 – 1000 GMT

ABSTRACT:

Background to social impact measurement broadly, impact measurement metrics, what's different about HAC/SIGHT COVID-19 assessment plan.

Abhik Banerji is an economist with 5 years of experience in the field of policy and international development. At the National Institute of Urban Affairs, he is the economist for the Enabling Strategic Plan for the Master Plan of Delhi-2041. Previously, Abhik has worked with the Africa Education Global Practice at the World Bank and the Research Department at the International Monetary Fund. Some of his previous key assignments include working on the Tanzania Free Basic Education Policy, Improving School Management Committees in rural Sindh, Pakistan and the 14th Finance Commission of India. He has a Masters in Applied Economics from the Department of Economics, Georgetown University.

Sreevas Sahasranamam is a lecturer in entrepreneurship and innovation at the Hunter Centre for Entrepreneurship, Strathclyde Business School, Glasgow, United Kingdom. His research predominantly focuses on innovation/entrepreneurship in and from emerging markets. He leads the doctoral training centre in Socially Progressive Innovation and Entrepreneurship at Strathclyde, and is also a part of the IEEE HAC assessment committee.

Keynote Speaker 8

Prof. Imed Ben Dhaou
Associate Professor at Unaizah College of Engineering, Qassim University, Saudi Arabia.
Topic: IoT for Smart Grid
Date: Thursday, 27th August, 2020
Time: 15:30 – 16:00 GMT

BIO

Prof. Imed Ben Dhaou (S'97-M'02, SM'2011) was born in 1972 in Tunisia. He received a Master's degree in Electrical Engineering from the Tampere University of Technology, Tampere, Finland, the Ph.D. degree from the Royal Institute of Technology, Stockholm, Sweden, and the docent degree from the University of Turku in 1997, 2002, 2019, respectively.

His research interests are in the areas of embedded systems for IoT, multi-agent systems for DC microgrid, interconnect optimization, low-power circuit design, high-level power estimation, robust estimation, Intelligent Transportation Systems, and VLSI for DSP and wireless systems. He has authored and co-authored more than 80 journals and conference papers in these areas.

Dr. Ben Dhaou has intensive teaching and administrative experience. He co-founded a private university. From 2014 to 2017 he was a consultant to the deanship for graduate studies at Qassim

University (KSA). Since 2019 he was appointed as a coordinator for the research unit and associate professor at Unaizah College of Engineering, Qassim University, Saudi Arabia.

ABSTRACT

Smart grid is a new revolution in the energy sector in which the aging utility grid will be replaced with a grid that, among other features integrates advanced control algorithms for teleoperations, incorporates distributed energy resources, and supports two way communication between customers and the power generation unit. Information and Communication Technology (ICT) is the cornerstone for the realization of the smart grid. In recent years, the Internet of Things (IoT) has emerged as a new interconnectivity platform that ties together objects, machines, humans, services, heterogeneous networks, and the like, using IP technologies. In this talk, we will cover the architecture of the smart grid and explore the usage of IoT in the realization of smart grid applications viz., HEM, transmission line monitoring (TLM), and substation automation.

Keynote Speakers 9

Ian Baring-Gould, Eric Lockhart and Tim Reber,
National Renewable Energy Laboratory, USA

Topic: Power System Transformation and the Evolving Minigrid
Date: Thursday, 27th August, 2020
Time: 16:00 – 16:30 GMT

ABSTRACT

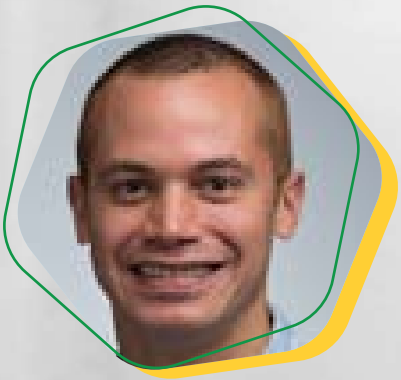
The emergence of new power system technologies coupled with innovative new business and policy paradigms over the last decade has brought the goal of universal electrification closer than ever before. The rise of distributed energy technologies such as low-cost PV, battery storage, electric mobility solutions, and more has allowed cutting edge technology to begin to reach into even the most remote communities. Advanced information technologies and automated grid control system have given system operators more insight and more control of power systems than ever before. At the same time, innovative new business models for how energy services are characterized, valued, and transacted continue to emerge and change how we think about and interact with our energy system. These new trends create opportunities to bring communities and consumers closer than ever before to their power system, requiring pro-active participants rather than simply passive customers. At the same time, these innovations present engineers and policymakers alike with a host of new challenges as they look to plan, build, operate and oversee the next generation power system. Focusing primarily on remote minigrid applications, a suite of NREL experts will discuss some of these new trends and the challenges and opportunities that accompany them.

BIO

Tim Reber is a Project Lead for International Programs at the U.S. National Renewable Energy Laboratory. He leads a diverse portfolio aimed at accelerating deployment of renewable energy and increasing access to reliable, clean and affordable electricity with partners around the world, with a primary focus in sub-Saharan Africa. His responsibilities include leading technical assistance, capacity building and knowledge-sharing for minigrids and off-grid energy access in collaboration with the Africa LEDS Partnership and Power Africa, supporting implementation of Low-Emission Development Strategies under the LEDS Global Partnership, and leading several bilateral clean power initiatives in support of the USAID-NREL Partnership, CIFF and other clients. His work touches a variety of topics including power sector transformation and reform, minigrid scale-up approaches, LEDS planning and implementation, variable renewable energy integration, and related policy and institutional issues. He has worked with countries around the world, including South Africa, Ghana, Kenya, Indonesia, Haiti and elsewhere.

BIO

Ian Baring-Gould is Wind Technology Deployment Manager at NREL and the National Technical Director of Market Acceleration and Deployment activities, focusing on assisting organizations deploy wind technologies and addressin obstacles to the implementation of wind energy through programs like the WINDExchange Project, the Collegiate Wind Competition, and Wind for Schools initiative. Ian also manages the distributed wind research and deployment portfolio for NREL and oversees the NREL's platform of deployment related wind work that includes environmental impacts. Ian also works extensively in the area of off grid power systems. Ian has over 30 years of work in the minigrid market sector with a focus on integrating renewable energy technologies into microgrid power systems, primarily for rural electrification



BIO

Eric Lockhart is a project leader at the U.S. National Renewable Energy Laboratory (NREL). He leads off-grid micro-grid research and technical assistance efforts, with topics including approaches to system design, community agreements, and pathways to developing sustainable business models. Eric is also the principal investigator for the Solar Energy Innovation Network (SEIN), which is a project focused on novel applications of solar and storage in domestic settings. His work through SEIN includes projects focused on resilience benefits that micro-grids can provide and potential synergies between distributed solar and electric vehicle charging

Keynote Speaker 10

Eng. Erastus K. Mwongera,
Chairman, Engineers Board of Kenya
Topic: Engineers Board of Kenya: Mission and Vision
Date: Thursday, 27th August, 2020
Time: 0930 – 1000 GMT

BIO

Eng. Mwongera is an Engineering Graduate from the SWANSEA University UK BSc (Civil Engineering) United Kingdom. He is currently a Management Consultant specializing in Engineering, Management and Strategic Planning.

He is a board member of the Federation of Kenya Employers. He is also the current Chairman of the Engineers Board of Kenya and the immediate past Chairman of the Kenya National Highways Authority.

Eng. Mwongera has had a distinguished career in the public service spanning forty years. He started his career in the water sector where he was Principal of the Kenya Water Institute and a director of Water Development for a combined period of 12 years. Thereafter, for over 10 years, he served as permanent secretary in the Office of the Vice President, Ministry of Home Affairs, Ministry of Lands and Housing, Ministry of Roads, Public Works and Housing, Ministry of Water Resources and Ministry of Land Reclamation, Regional and Water Development. In recognition for his distinguished career in the Public Sector he was decorated with Chief of Burning Spear (CBS), Elder of Burning Spear (EBS) and Grand Warrior of Kenya (OGW).

Eng. Mwongera is a distinguished engineer who has played a key role in the development of the engineering profession and practice in Kenya as a past chairman of the Engineers' Registration Board and he is currently chairman of the Eminent Fellow Engineers' Forum.

ABSTRACT:

1. The Board's mandate and the impact of regulation in streamlining the delivery of professional engineering services.
2. Capacity development and collaborations with other institutions in the development of the engineering profession in Africa.
3. The role the Board is playing in supporting the government to achieve its vision 2030.

TECHNICAL PROGRAM COMMITTEE

TECHNICAL PROGRAM COMMITTEE CHAIRS

Chair Dr. Kennedy Aganah – Maxar, Palo Alto CA, USA
Co-Chair G.Engr Benson Onyango Ojwang – University of Nairobi, Kenya

TRACK AND PROGRAM CHAIRS

Track 1: Smart Grid, Microgrid, Metering Design and Cyber Security, FACTS
Chair Prof. Thomas Olwal – Tshwane University of Technology, South Africa
Co-Chair Dr. Fred Mzee Awuor – Kisii University, Kenya
Co-Chair Prof. Kouzou Abdellah – Ziane Achour University of Djelfa, Djelfa, Algeria

Track 2: Renewable Energy Resources, Grid Integration Technologies, Electric Transportation
Chair Prof. Josiah Munda – Tshwane University of Technology, South Africa
Co-Chair Engr. Bukola Tunde Adetokun – JKUAT, Kenya
Co-Chair Prof. Steve Adeshina – Nile University, Abuja, Nigeria

Track 3: Electrical Safety, Power System Protection & Standards
Chair Engr. John Nelson – NEI Electric Power Engineering (Retired)
Co-Chair Engr. Francis Djirackor – Elris Communications Services Limited, Kenya

Track 4: Power Converter Topologies, Electric Drives, Modeling & Control
Chair Dr. Abraham Gebregergis – Veoneer, Southfield, MI, USA
Co-Chair Prof. Kouzou Abdellah – Ziane Achour University of Djelfa, Djelfa, Algeria
Co-Chair Dr. Avoki Omekanda – General Motors, Global R&D Center, Warren, MI, USA

Track 5: Power System Planning, Energy Efficiency, Power Projects, Power Engineering Education
Chair Prof. Heywood Ouma Absaloms – University of Nairobi, Kenya
Co-Chair Prof. Irene S. Fahim – Nile University, Egypt

Track 6: Electric Machines, Drive Systems and Topologies
Chair Dr. Stanley Kamau – JKUAT, Kenya
Co-Chair Engr. Josephine Djirackor – Elris Communications Services Limited, Kenya

Track 7: Signals, Systems and Interfaces in Power Systems
Chair Dr. Shadrack Mambo – Kenyatta University, Kenya
Co-Chair Dr. Wilfred Mwema – University of Nairobi, Kenya

Post Graduate Forum
Chair Dr. Imed Ben Dhaou – University of Monastir, Tunisia
Co-Chair Prof. Irene S. Fahim – Nile University, Egypt
Co-Chair Dr. Avoki Omekanda – General Motors, Global R&D Center, Warren, MI, USA
Co-Chair Prof. Kouzou Abdellah – Ziane Achour University of Djelfa, Djelfa, Algeria

Technical Program and Plenary Session
Chair Engr. Abdullateef Aliyu – Phase 3 Telecom, Abuja, Nigeria
Co-Chair Dr. Shadrack Mambo – Kenyatta University, Kenya
Co-Chair Dr. Muhammad Buhari – Bayero University, Kano, Nigeria
Co-Chair Dr. Omowunmi Mary Longe – University of Johannesburg, South Africa

Publication

Chair	Dr. Mary Ahuna – Technical University of Kenya
Co-Chair	Dr. Kennedy Aganah – Maxar, Palo Alto, CA, USA
Co-Chair	Engr. Ihuoma Uluocha – Daystar Power, Nigeria
Co-Chair	Prof. Olorunfemi Ojo – Tennessee Tech University
Co-Chair	Engr. Francis Djirackor – Elris Communications Services Limited, Kenya
Co-Chair	Dr. Innocent Kamwa – Hydro-Quebec Research Institute and Laval Univerisity
Co-Chair	Engr. Josephine Djirackor – Elris Communications Services Limited, Kenya

Panel Sessions and Tutorials

Chair	Dr. Avoki Omekanda – General Motors, Global R&D Center, Warren, MI, USA
Co-Chair	Engr. Mike Wilson – IEEE Smart Village, USA
Co-Chair	Dr. Bruno Lequesne – E-Motors Consulting, LLC, USA
Co-Chair	Engr. Eliud Limo – Kenya Power, Kenya
Co-Chair	Humphrey Muhindi SMIEEE – SEACOM, Kenya
Co-Chair	Dr. Kennedy Aganah – Maxar, Palo Alto CA, USA
Co-Chair	Prof. Kouzou Abdellah – Ziane Achour University of Djelfa, Djelfa, Algeria
Co-Chair	Engr. Abdullateef Aliyu – Phase 3 Telecom, Abuja, Nigeria
Co-Chair	Dr. Abraham Gebregergis – Veoneer, Southfield, MI, USA

TPC MEMBERS

Name	Affiliation
Dr. Kennedy Aganah (Chair)	Maxar, Palo Alto CA
G.Engr Benson Ojwang (Co-Chair)	University of Nairobi
Engr. Abdullateef Aliyu	Phase 3 Telecom, Abuja,Nigeria
Dr. Mary Ahuna	Technical University of Kenya
Engr. Bukola Tunde Adetokun	JKUAT, Kenya
Engr. John Nelson	NEI Electric Power Engineering (Retired)
Dr. Avoki Omekanda	General Motors, Global R&D Center, Warren, MI, USA
Dr. Fred Mzee Awuor	Kisii University
Prof. Wei-Jen Lee	IAS President Elect
Prof. Irene S. Fahim	Nile University, Egypt
Dr. Abraham Gebregergis	Veoneer, Southfield, MI, USA
Engr. Ihuoma Uluocha	Daystar Power
Engr. Francis Djirackor	Elris Communications Services Limited
Engr. Josephine Djirackor	Elris Communications Services Limited
Engr. Andrew Leon	Invenergy LLC
Dr. Bruno Lequesne	E-Motors Consulting, LLC
Engr. Mike Wilson	Smart Village
Prof. Olorunfemi Ojo	Tennessee Tech University
Prof. Kouzou Abdellah	Ziane Achour University of Djelfa, Djelfa, Algeria
Dr. Imed Ben Dhaou	University of Monastir, Tunisia
Prof. Thomas Olwal	Tshwane University of Technology
Prof. Josiah Munda	Tshwane University of Technology
Dr. Wilfred Mwema	University of Nairobi
Prof. Heywood Ouma Absaloms	University of Nairobi
Dr. Stanley Kamau	JKUAT, Kenya
Prof. Steve Adeshina	Nile University, Abuja
Dr. Muhammad Buhari	Bayero University, Kano, Nigeria
Dr. Omowunmi Mary Longe	University of Johannesburg, South Africa
Dr. Shadrack Mambo	Kenyatta University, Kenya
Dr. Innocent Kamwa	Hydro-Quebec Research Institute and Laval Univerisity

REVIEWERS

Thanks to our reviewers below who helped to conduct peer reviews of all submitted papers working with authors to ensure the highest quality of papers were accepted and presented at the conference.

Aban Ayik
Abayomi Adebiyi
Abbas Akintonde
Abdullateef Aliyu
Abdullateef Bamigbade
Abdulrahman Abdalla Faris
Abel Airoboman
Abraham Nyete
Abraham Woldegiorgis
Adedayo Asaolu
Agha Francis Nnachi
Akintonde Abbas
Akshay Kumar Saha
Al-Mas Sendegeya
Alex Muumbo
Aliyu Hassan
Amare Assefa
Amir Khosravi
Anant Singh
Andre Zau
Andrew Ackerman
Arthur James Swart
Arumugam Elumalai
Atanda Raji
Avoki Omekanda
Ayalsew Tariku
Ayman El-Refaie
Aymen Flah
Ayobami Olajube
Ayodele Temitope Raphael
B Ramkiran
Babatunde Adewolu
Bakhe Nleya
Benjamin Kroposki
Benson Ojwang
Bruce Krogh
Bruno Lequesne
Bubele Papy Numbi
Bukola Tunde Adetokun
Chege Kirongo
Christopher Muriithi
Chudy Michal
Clifton Oertli
Daniel Zimmerle
El-Refaie Ayman
Elvis Twumasi
Emile Niringiyimana
Emmanuel Frimpong
Eng. Martin Nzomo
Esrom Malatji
Evans Ojo
F. Maciel-Barbosa
Famous O. Igbinovia
Fitsum Bekele Tilahun
Francis Djirackor
Francis Mwasilu
Frank Gotte
Fred Mzee Awuor
Fundiswa Mthethwa
Gideon Gope
Giovanni Dushimimana
Hao Chen
Heywood Absaloms
Hilary Chisepo
Hugo Vaughan
Imed Ben Dhaou
Innocent Davidson
Irene Fahim
Irene Masenge
Irungu Kimani
Isaac Otchere
Isaiah G. Adebayo
J Hernandez
Jack Nyanjom
Jaco Jordaan
Jacquelynne Hernandez
Jameel Agil
James Braid
James Owuor
Jane Namaganda-Kiyimba
Jitender Kaushal
Joel Ogunyemi
Joseph Mutale
Joseph O. Dada
Josephine Djirackor
Josiah Munda
Julio Usaola
Kankam Mark
Karin Kritzinger
Kayode Akindeji
Kehinde Awodele
Keith Malmedal
Kennedy Aganah
Kennedy Okafor
Keren Kaberere
Kiiza Respicius Clemence
Kiiza Respicius Clemence
Kimani Irungu
Kingsley Ogudo
Kinyua Wachira
Kipleting Limo
Kofi Sarpong Adu-Manu
Kwabena Amoako Kyeremeh
Lawrence Letting
Lesedi Masisi
Lesley Arakkal
Maake Benard
Manjeet Singh Gurna
Mark Kankam
Mary Ahuna
Mbali Mabaso
Mbika Muteba
Mbuyu Sumbwanyambe
Melaku Matewos
Meshia Cédric Oveneke
Michael Awaah
Michal Chudy
Mohammed Ouassaid
Moses Onibonoje
Moussa Coulibaly
Mugeni Samantha Niyoyita
Musasa Kabeya
Mussie Hagos
Mzee Awuor
Nana Twum Duah
Ndamulelo Mararakanye
Neelakantan Padmanabhan
Nehad El-Sherif
Ngancha Patrick
Nitin Kumar Saxena
Nitin Saxena
Niyigena Jeanne Baptiste

Nsilulu Tresor Mbungu
Nyangaresi Vincent
Ogunjuyigbe Ayodeji Samson
Oladimeji Ayamolowo
Olakunle Alao
Olawale Popoola
Olubayo Babatunde
Olurotimi Awodiji
Olusayo Ajeigbe
Oluwagbenga Apata
Omowunmi Mary Longe
Oriedi Akumu
Pankaj Verma
Patrick Manditereza
Patrick Ngancha Bonja
Paul Musyoka
Paul Nyombi
Paul Olamba
Peter Akuon
Peter Freere
Peter Musau Moses Musyoki
Pitshou Bokoro
Rebekah Shirley
Respicius Clemence Kiiza
Richard Oladayo Olare-waju
Robert Durham
Rudiren Pillay Carpanen
Sahil Mehta
Sameer Hameer
Sameerchand Pudaruth
Samuel Kibaara
Samuel Ouma Otieno
Santhosh Veigas
Shafiqa Keddar
Siyanda Ncwane
Stanley Kamau
Steve Adeshina
Steven Omondi Awino
Sula Ntsaluba
Sunetra Chowdhury
Sydney Kadikula Zimba
Tamba Jamiru
Tarkeshwar Barua
Tebogo Kgogo
Temitope Raphael Ayodele
Thomas Olwal
Tobiloba Somefun
Tolulope Adesina
Tshwarelo Mathebula
Tunde Y. Salihu
Vijay Radhakrishna
Wei-Jen Lee
Wilfred Mwema
Willy Siti
Wyclife Odongo Amolo
Yanamadala Janakinadh
Ye-Obong Udoakah
Yona Andegelile
Yutaka Sasaki
Zacchaeus Adetona
Zakerian Ali

CLOSING
Request-for-Proposals of future 2022 & 2023 IEEE PES/IAS PowerAfrica Conferences

All interested countries are asked to contact the PowerAfrica Steering Committee for more information and guidance towards submitting their proposals.

Dr. Henry Louie,
PowerAfrica Steering Committee Chair

Eng. Eliud Limo

General Chair, PowerAfrica Conference 2020-2021

Closing Remarks by The Conference General Chair

Excellencies, ladies and gentlemen,

We have reached the end of the 7th Annual IEEE PES, IAS PowerAfrica Conference 2020. It is a sad that we shall be closing the door on lively and stimulating debates, as well as bidding farewell to such eminent people from different parts of the world, in the fields of government, industry, academia and the media.

This event being the first virtual powerafrica conference is an outstanding example – our minds have been assailed by a torrent of ideas, information and visions. There is, indeed, plenty to reflect upon and, if this in any way enhances our individual and collective contributions to meeting the global energy challenges, then the conference can truly be adjudged a success.

Finally, Excellencies, ladies and gentlemen,

On behalf of you all, I should like to thank His Excellency the Principal Secretary, State Department of Energy Kenya, the heads of international organizations, the chief executives of national and international companies, and all the other speakers and panel members. Their presence has been invaluable and without any doubt helped make the event a great success.

We greatly appreciate the support we have received from the members of the media, in covering our activities. It is very important that the views expressed here are disseminated to a wider readership and audience, and clearly this task has been in very capable hands.

We are also grateful to all those who have been involved in the organization of the event. While they are too numerous to name individually, prominent among them are the Local Organizing Committee and the PowerAfrica Conference Steering Committee, the International and Advisory committee, PES and IAS Staff, the Technical Program Committee, our Sponsors, Technical and Institutional supporters as well as all members and service providers who spent time and effort to see this conference through also deserve our gratitude.

And finally, to thank our attendees whose contribution we highly value for participating in this conference. Excellencies, ladies and gentlemen, Since the PowerAfrica conference is an annual event, we look forward to seeing you again in June 2021, for the in-person Conference in Nairobi, Kenya when we shall reconvene some of the discussions held here and another topical theme affecting the power and energy industry.

Thank you, stay safe and goodbye.

Eng. Eliud Limo, SMIEEE
General Chair, PowerAfrica Conference 2020-2021

Sponsors & Partners

SPONSORING SOCIETIES

The Power & Energy Society (PES) provides the world's largest forum for sharing the latest in technological developments in the electric power industry, for developing standards that guide the development and construction of equipment and systems, and for educating members of the industry and the general public. Members of the Power & Energy Society are leaders in this field, and they – and their employers – derive substantial benefits from involvement with this unique and outstanding association.
https://www.ieee-pes.org/

IEEE Industry Applications Society focuses specifically on the unique needs of industry and commerce. IAS is a source of professional power to its nearly 14,000 worldwide members. Through a network of over 370 chapters globally, regional events and national and international conferences, the society keeps members abreast of current developments in the area of technology in electricity and electronics. IAS enriches both its individual members and the industry as a whole through the sharing of specific industry-related solutions.
https://ias.ieee.org/

TECHNICAL CO-SPONSORS

The IEEE Kenya Section is located in Region 8. It was founded in 1982 and has 200+ members with a goal to conduct activities that assist the local IEEE members to enhance their professional careers & communities.

https://ieeekenya.or.ke/

IEEE, through its Board of Directors–endorsed IEEE in Africa Strategy, recognizes the opportunity to assist in cultivating greater engineering capacity to advance technology and innovation. The new Africa Council was approved by the MGA Board in June 2018, and it will be a major step toward the long-term stability and sustainability of IEEE's support of African engineers. The Council includes all African Sections and Sub Sections that wish to participate, and will ultimately become the focus for much of IEEE's engagement on the continent.
https://site.ieee.org/africa-council/

PLATINUM SPONSORS

Our company was founded over 30 years ago in a small town in Austria where we set out to develop compact test sets for testing protection and measurement devices in utilities. From a small group of dedicated engineers, we have grown into an international company with 24 offices worldwide and customers in over 160 countries. Although our product range and the possible areas of application have increased, some elements have remained constant:

Our working life revolves around energy – through energy, dedication and the creative minds of our team we are able to provide you with products, solutions and services that allow your electrical power system to run smoothly, safely and efficiently.
https://www.omicronenergy.com/en/

GOLD SPONSORS

Amotech E.A, founded in 2012, is East Africa's leading supplier of test and measurement instruments. The team has practical experience on the use of the products, making the technical services offered of high quality. The areas of technical service include: manufacturing, solar producer, hospitals, mining, training institutions, telecommunication, transport & power generation.
http://amotech.co.ke/

Elspec is a leading power quality solutions & services provider to the global market place. Our extensive infrastructure of partners & authorized representatives extends over 75 countries throughout the world. Elspec's technology simplifies the understanding of the quality of power itself and helps our customers to enhance electrical network power quality. Our innovations in power quality analyzers and solutions can be found in almost any sector, spanning from the industrial and commercial to the utility sectors. Some of the most substantial installations include data centers, plastic & silicon factories, electrical utilities, commercial buildings, car manufacturers, healthcare centers, port authorities.
http://elspec-ltd.com/

SUPPORTERS

The IEEE Humanitarian Activities Committee (HAC) provides a suite of resources that inspire and enable IEEE volunteers around the world to carry out and support impactful humanitarian technology and sustainable development activities at the local level.
HAC focuses on raising awareness of how technically trained people can contribute, providing training for engagement in humanitarian technology and sustainable development activities, supporting and evaluating projects, and cultivating relationships and leveraging opportunities, so that IEEE can become a leader in the global sustainable development community. The committee reports to the IEEE Board of Directors.
https://hac.ieee.org/

IEEE Smart Village (ISV) has a unique approach to support the world's energy-impoverished communities by providing a comprehensive solution combining renewable energy, community-based education, and entrepreneurial opportunities. ISV provides seed-funding to carefully selected community entrepreneurs based upon a credible business plan that will impact significant number of people with electricity, education and jobs.
https://smartvillage.ieee.org/

INSTITUTIONAL SUPPORT

The energy sector in Kenya is managed by the Ministry of Energy and Petroleum (MoEP) which generates policies that are designed to create an enabling environment for efficient operation and growth of the sector. It sets the strategic direction for the growth of the sector and provides a long-term vision for all sector players.
https://energy.go.ke/

The Engineers Board of Kenya (EBK) is a statutory body established under Section 3(1) of the Engineers Act 2011. The Board has the overall mandate of developing and regulating engineering practice in Kenya. The development and regulation of engineering practice is considered a key component to the achievement of infrastructure foundation under the country Vision 2030 development blueprint.
https://ebk.or.ke/

MEDIA PARTNERS

We are an energy consulting and communication company. We are sustainability marketing experts on a mission to transform what you do good for people and business into business success. We help our clients develop brands and businesses that are desirable to customers and provide employment. We also design, provide innovative design conferencing concepts for our international clients and organize tradeshows. We have a training, gender and advocacy division that has roled out programmes and mentorship through the East Africa community of women in Energy; through which we have conference and awards ceremony every year and an FGM to STEM programme.
https://www.brandsandbeyond.co.ke/

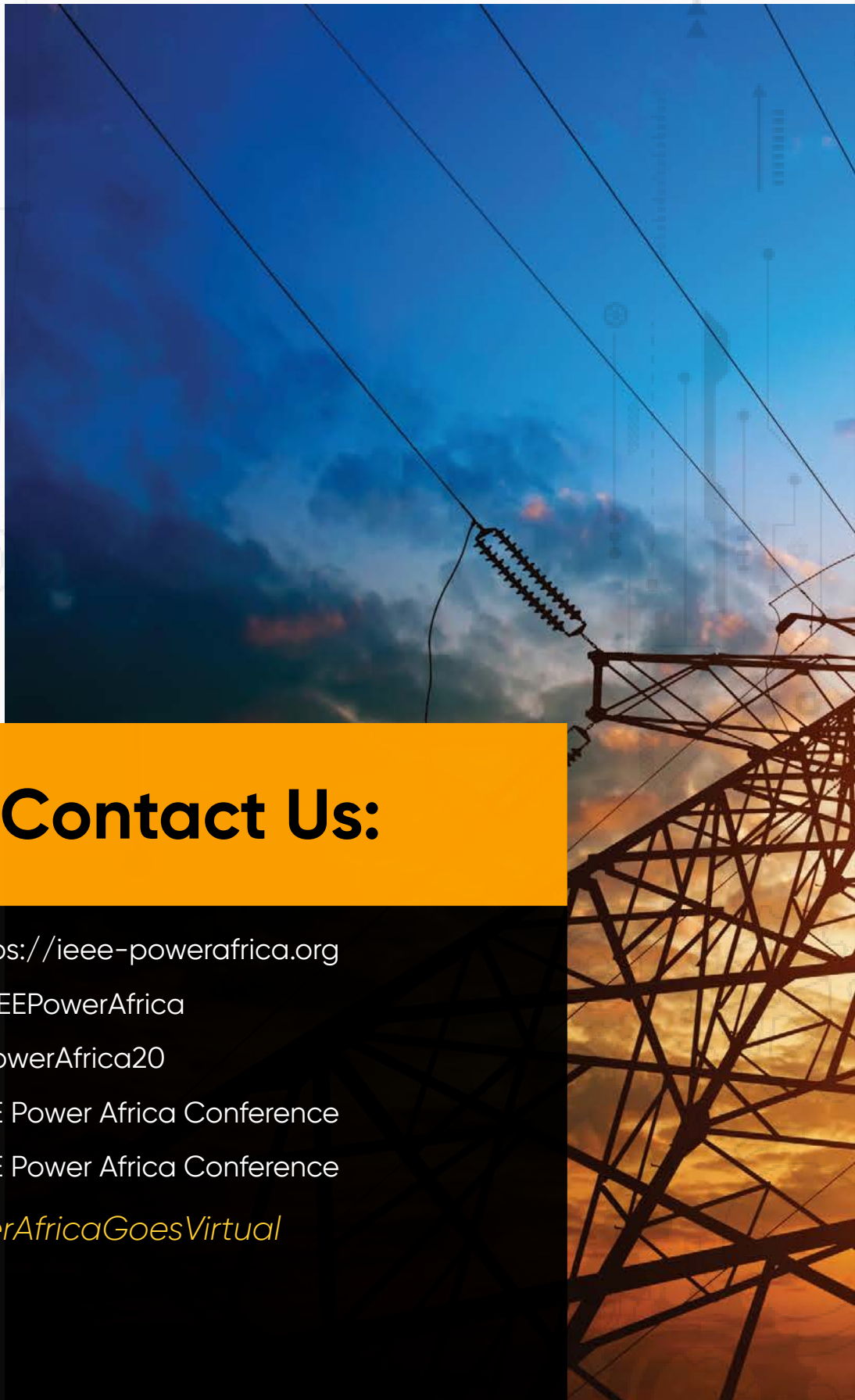
Kenya Engineer is the definitive publication for engineers in East Africa and beyond. Kenya Engineer offers peer review publication as well as advertising platform. IPL has been publishing the Kenya Engineer Journal since 1972.
https://www.kenyaengineer.co.ke/

ESI Africa – Africa's leading power and energy journal – is positioned as an impartial industry mouthpiece, delivering the latest technical developments, breaking news and analysis in both print and digital formats. Since 1996, ESI Africa has presented unique market opportunities to both buyers and sellers; facilitating sector stakeholder engagement through key event media partnerships and through our position as host publication of the Clarion Energy Power series worldwide.
https://www.esi-africa.com/

IEEE PES & IAS
PowerAfrica
Conference

Thank You

For your Attendance



Contact Us:

https://ieee-powerafrica.org

@IEEEPowerAfrica

@PowerAfrica20

IEEE Power Africa Conference

IEEE Power Africa Conference

#PowerAfricaGoesVirtual