

**Work Programme**  
**1<sup>st</sup> ASRIC Conference on Engineering Sciences**  
**Engineering and Informatics for Africa's**  
**Urbanization**

**6<sup>th</sup> – 8<sup>th</sup> September 2021**

<b>Day 1</b>		
<b>Online Meeting arrangements 8.30 to 09.00 AM West Africa Time (GMT+1)</b>		
<b>Opening session</b> Session is moderated By Dr. Ahmed Hamdy AU-STRC/ASRIC 09.00 AM to 9.40 AM		
<i>Chancellor Obour Institute</i>	<b>Prof. Abdallah El-Dahshan</b>	(5Mins)
<i>President World Federation of Engineering Organizations (WFEO)</i>	<b>Prof. Dr. Eng. GONG Ke</b>	(5Mins)
<i>Federation of African Engineering Organization</i>	<b>Eng. Carlien Bou-Chedid</b>	(5min)
<i>Chair ASRIC</i>	<b>Prof. Ratemo W. Michieka</b>	(5mins)
<i>Minister of Higher Education and Scientific Research – Arab Republic of Egypt</i>	<b>H.E Dr. Khaled Abdel Ghaffar</b>	(10Mins)
<i>Commissioner ESTI</i>	<b>H.E. Prof. Sarah Anyang Agbor</b>	(10Mins)
<b>Brief by key development partners</b> Moderated by Mr. Waleed El-Dahshan (Obour Institute) 9.40AM to 1.00PM		
<i>Overview of ASRIC Movement and activities</i>	<b>Dr. Ahmed Hamdy</b>	20min
<i>Overview of Federation of African Engineering Organization</i>	<b>Eng. Carlien Bou-Chedid</b>	20min
<i>Mega Cities Vulnerabilities and Challenges in the 21<sup>st</sup> Century</i>	<b>Dr. Amr Lashin</b>	20min
<b>Discussion (30min)</b>		
<b>Health Break</b> 11.10 AM to 11.30 AM		
<b>Cont. Brief by key development partners</b> Moderated by Mr. Waleed El-Dahshan (Obour Institute) 11.30AM to 1.00PM		
<i>UNESCO Report on AI for Detection of Water Leaks in Urban Environment</i>	<b>Prof S.Ramasamy,</b>	20min
<i>Hightlight on the 2<sup>nd</sup> Engineering Report (by UNESCO) “ Engineering for Sustainable Development: Delivering on the SDGs”</i>	<b>Ms. Amal Kasry</b>	20min
<i>European Commission Research and Innovation activities in Africa: Horizon Europe</i>	<b>Dr. Heba Gaba</b>	20min

Discussion (30min)		
LUNCH BREAK 1.00 PM to 2.00 PM		
<b>Conference Sessions on Eco Engineering for Mega Cities and Urbanization</b>		
<b>1. Keynote Addresses on Eco Engineering for Mega Cities and Urbanization</b>		
Session is moderated By Dr. Mohammed Kyari (AU-STRC/ASRIC) 2.00 PM to 2.50 PM		
The challenges of evolution of African historical cities to mega cities; <i>A case study of Kano Tunbin Giwa</i>	<b>Dr. Munzali Dantata – ALLSTATES GROUP</b> (Green Fields Blue Skies)	20min
Green & low carbon solutions for mega cities infrastructure	<b>Dr. Martin Van Veelen</b> (Chair, Infrastructure WG)	20min
Discussion (10min)		
<b>2. Technical Paper Presentation on Eco Engineering for Mega Cities and Urbanization</b>		
<b>Session Eco-1</b> Chaired by (TBD) Rapporteur by (TBD) 2.50PM to 4.00PM		
1) <i>Co-Carbonisation of Biomass-Plastic Wastes in an Integrated Thermochemical Process</i>	<b>Adewale George Adeniyi</b>	10min
2) <i>Borehole Water Quality Within the Federal University of Technology, Akure, Nigeria</i>	<b>Samuel B. Akeju</b>	10min
3) <i>Heavy Metals Analysis in Koche River and the Associated Impacts on Adjacent Community, Tatek Industrial Zone, Ethiopia</i>	<b>Dr. Mathewos Kebede</b>	10min
4) <i>Integrated Management of Industrial Wastewater Treatment and Its Reuse Options for Sustainable Developments - A Green Technology Concept</i>	<b>SingananeMalairajan1</b>	10min
5) <i>The Impact of Urbanization on Sustainable Development in Egypt and South Africa - Comparative Study</i>	<b>Salah Amany</b>	10min
Discussion (20min)		
<b>Session Eco-2</b> Chaired by (TBD) Rapporteur by (TBD) 4.00PM to 5.10PM		
6) <i>Safe Disposal of Wastewater in Irrigation and Its Effect on Soil Properties Under Khartoum Conditions</i>	<b>Ali Widaa Mohammed Elamin,</b>	(10min)
7) <i>Water Scarcity - the Driving Force of Underdevelopment in Rural Areas of Developing Countries</i>	<b>Sasanya, Blessing Funmbi</b>	10min

8) <i>Converting an Egyptian Commercial Building to NZEB Using Low-Carbon Measures</i>	<b>Dr. Ayman Abdelhamed</b>	10min
9) <i>An Efficient Analysis of Ad-Hoc on Demand Distance Vector Routing Protocol at Different Transmitted Power and Speeds</i>	<b>Saad Elsayed</b>	10min
10) <i>Zero Energy Building Using Green Architecture Application</i>	<b>Mohamed Salah Fathi Ezz</b>	10min
<b>Discussion (20min)</b>		
<b>End of Day 1</b>		
<b>Day 2</b>		
<b>Cont. Conference Sessions on Eco Engineering for Mega Cities and Urbanization</b>		
<b>Session Eco-3</b>		
<b>Chaired by (TBD) Rapporteur by (TBD)</b>		
<b>9.00AM-10.20AM</b>		
11) <i>Optimal Weibull Distribution Parameters Estimation for Wind Energy Applications in West Africa Regions Using Six Numerical Methods</i>	<b>Agbassou Guenoukpati</b>	10min
12) <i>Evaluation of Various Heat Recovery Systems Integrated with VCAC System Under Arid Climatic Conditions</i>	<b>Sayed Ali</b>	10min
13) <i>Effect of Adding Fly Ash to Improve Mechanical Properties of Concrete Made of Cement and Cement Kiln Dust</i>	<b>Mohamed Ahmed AbdelQader Hassan</b>	10min
14) <i>Particle Size Effect on the Mechanical and Physical Properties of Mahogany (Kahya Senegalensis) Sawdust Particleboards Made from with Pearl Bone Glue</i>	<b>Soviwadan Drovou</b>	10min
15) <i>Aromatic Polyamide Membrane for Water Desalination Grafted with Copolymer (Acrylic Acid)</i>	<b>Raafat Abo-Zeid</b>	10min
<b>Discussion (20min)</b>		
<b>Health Break</b>		
<b>10.20 AM to 10.40 AM</b>		
<b>Conference Session on Informatics and Big data for urbanization and Mega City Management</b>		
<b>1. Keynote Address on Informatics and Big data for urbanization and Mega City Management</b>		
<b>Session is Moderated by Prof. Medhat Mokhtar (Obour Institute)</b>		
<b>10.40 AM to 11.30AM</b>		
<b>AI for smart and effective mega cities</b>	<b>Prof. Eng. GONG Ke</b>	20min

	(President – World Federation of Engineering Organizations)	
<b>Connectivity and Smart Energy Management in Mega Cities</b>	<b>Prof. Bamidele Adebisi</b> (University of Manchester Metropolitan University UK)	20min
<b>Discussion (10min)</b>		
<b>2. Technical Paper Presentation on Informatics and Big Data for urbanization and Mega City Management</b>		
<b>Session Big Data-1</b> <b>Chaired by (TBD) Rapporteur by (TBD)</b> <b>11.30AM to 12.40PM</b>		
<b>16)</b> <i>Scaling Outcome Correlated Binary Big Data Using Estimates of Bivariate Dispersion Parameters</i>	<b>Ahmed M. M. Elsayed</b>	10min
<b>17)</b> <i>An Overview of the Recent Developed MSDES Software Used in Distributed Microstrip Circuit Design</i>	<b>Saad El Sayed</b>	10min
<b>18)</b> <i>Computer-Aided Design and Analysis of Different Configurations of Singly - Balanced Microstrip Diode Mixers Using the Modified MSDES and ADS Packages</i>	<b>Saad El Sayed</b>	10min
<b>19)</b> <i>Prediction of Flyrock Throw Using Gaussian Process Regression Machine Learning Models</i>	<b>Akuinor Tsidi Bright</b>	10min
<b>Discussion (20min)</b>		
<b>Lunch Break 12.30pm – 2.00pm</b>		
<b>Session Big Data-3</b> <b>Chaired by (TBD) Rapporteur by (TBD)</b> <b>2.00PM to 3.00PM</b>		
<b>20)</b> <i>Sentiment Analysis in Twitter Using Machine Learning</i>	<b>Rasha el Stohy</b>	10min
<b>21)</b> <i>The Effect of the Interaction Between the Type of Learning Environment (Face to Face - Online) and the Type of Test (Essay - Bubble Sheet) on the Results of Academic Achievement Among Students of Obour Institutes</i>	<b>Zeyad Aly Khalil</b>	10min
<b>22)</b> <i>Face Mask Recognition Using Artificial Intelligence with Convolutional Neural Network for Access Control</i>	<b>Joseph Owusu</b>	10min
<b>23)</b> <i>The Impact of Earnings Quality on Prediction of Financial Distress (an Applied Study on Companies Listed in the Egyptian Stock Exchange)</i>	<b>Haitham Mohamed Elbasuony</b>	10min

<b>Discussion (20min)</b>		
<b>Session Big Data-4</b>		
<b>Chaired by (TBD) Rapporteur by (TBD)</b>		
<b>3.00PM to 4.00PM</b>		
24) <i>Multi-Classification Brain Tumor Image Using CNN</i>	<b>Osama Mokhtar Hassan</b>	10min
25) <i>Machine Learning Techniques for Improving Study of Heart Disease Prediction</i>	<b>Abdelmegeid Amin Ali</b>	10min
26) <i>Malware Classification Based on Machine Learning Techniques</i>	<b>Ashraf Farouk Heikal</b>	10min
27) <i>New Probability Distribution Model: Stress-Strength Reliability &amp; Application to Coronavirus.</i>	<b>Saeed Elsayed Hamed</b>	10min
<b>Discussion (20min)</b>		
<b>End of Day 2</b>		
<b>Day 3</b>		
<b>Conference Session on Urban and Mega Cities Planning development and management</b>		
<b>1. Keynote Addresses on Urban and Mega Cities Planning development and management</b>		
Session moderated By Prof Sammy Chumbow (ASRIC Vice Chair) 9.00 AM to 10.00 AM		
Mega Cities Challenges and Opportunities Economic Perspectives	Prof. Oliver Saasa	20min
Planning and development of sustainable waste management system for eco-urban and mega cities in Africa	Prof. Lawrence Ezemonye Igbinedion University	20min
<b>Discussion (15min)</b>		
<b>2. Technical Paper Presentation on Urban and Mega Cities Planning development and management</b>		
<b>Session Urban-1</b>		
<b>Chaired by Prof Mosto Onouha Rapporteur by (TBD)</b>		
<b>10.00AM to 11.10AM</b>		
28) <i>Health Risk Assessment of Heavy Metals (Persistent Toxic Substances PTSs) in Ground and Surface Water near Municipal Dumpsites within Ilorin Metropolis, Kwara State Nigeria</i>	<b>Abdurrahman Ameen</b>	10min
29) <i>Influence of Cohesive Soil Depth on Compressibility Coefficient and Coefficient of Volume Change</i>	<b>M.A. Mahmoud</b>	10min
30) <i>Assessment of Accessibility and</i>	<b>Emiri Dafe Anieka</b>	10min

<i>Disability Planning in Nigerian Construction Industry</i>		
31) <i>Evaluation of Domestic Transportation and Utilization for Natural Gas in Nigeria</i>	<b>Nnadikwe, Johnson</b>	10min
32) <i>Effect of Sulphate Attack on the Strength of Cement Brands Blended with Cassava Peel Ash</i>	<b>Kolawole Adisa Olonade</b>	10min
<b>Discussion (20min)</b>		
<b>Health Break 11.10AM to 11.30AM</b>		
<b>Session Urban-2 Chaired by (TBD) Rapporteur by (TBD) 11.30 AM to 12.30PM</b>		
33) <i>Contribution of Steel Shear Reinforcement in Two-Way Shear Resistance of Flat Plates (Parametric Study)</i>	<b>Mohamed Mahmoud Badawy</b>	10min
34) <i>Modeling Electricity Demand Response Potential for Residential Households in Ghana, Case Study of 300 Households in Sunyani</i>	<b>Ansu Gyabaah, John</b>	10min
35) <i>Dynamics of Spatial Spread and Rainwater Management in the City of Lomé Togo</i>	<b>Kodjovi S. Gbafa</b>	10min
36) <i>Geospatial ICT Infrastructure for City Management in Africa. Case Study of Ngaoundéré (Cameroon)</i>	<b>Michel Tchotsoua</b>	10min
<b>Discussion (20min)</b>		
<b>Lunch Break 12.30pm – 2.00pm</b>		
<b>Session Urban-3 Chaired by (TBD) Rapporteur by (TBD) 2.00PM to 3.00PM</b>		
37) <i>Sustainability of Nuclear Energy and Minimization of Environmental Impacts of Nuclear Waste Using Fast Reactors</i>	<b>Amr Ibrahim</b>	10min
38) <i>The Effect of Cohesive Soil Depth on Consolidation Coefficient and Compression Index</i>	<b>M.A. Mahmoud</b>	10min
39) <i>Investigation into the Inspection and Monitoring of Pipeline, Casting and Tubing</i>	<b>Nnadikwe, Johnson</b>	10min
40) <i>A Proposed Smart Archaeological Tourism Walk Plan: A Case Study on the Holy Family Journey in Sharkia</i>	<b>Rasha el Stohy</b>	10min

<i>Governorate</i>		
<b>Discussion (20min)</b>		
<b>Closing Session</b> <b>Moderated by Dr. Mohammed Kyari</b> <b>3.00 PM to 3.20PM</b>		
Remarks	<b>Executive Director AU-STRC &amp; ASRIC</b> <b>Dr. Eng. Ahmed Hamdy</b>	(10 Mins)
Closing remarks	<b>Prof Ratemo Michieka and Prof. Abdallah El-Dahshan</b>	(10 Mins)
<b>Closing session for 1<sup>st</sup> ASRIC Conference on Engineering Sciences</b>		