

## Concurrent Technical Sessions

Based on The Technical Session Schedule

### Session No.1

#### TRACK (1)

Hall 1-A01, B 105, 1st Floor

Chair: Prof. Abdelhakim Abdelhadi

#### Sustainable Manufacturing and Industrial Ecology

Optimizing Building Performance and Climate Resilience in Arid Climates through Dynamic Climate Data Modeling: A Morphing Approach for Climate Change Mitigation in Hot Dry Areas. *Abdelhamed Ezzat*

Digitalization as an Enabler of Circular Economy in Saudi Arabia's Manufacturing Sector. *Serhan Alshammari, Uchenna Ani, Konstantinos Salonitis, Okechukwu Okorie, and Shoaib Sarfraz*

Natural ventilation for transitional spaces: Case study of an airport terminal. *Humera Mughal, Anber Rana*

From polymeric waste to disposable electrochemical environmental sensors for water quality monitoring. *Adeel Afzal, Nimra Bashir, Taimur Ali, Tajamal Hussain, and Adnan Mujahid*

Deployment of Prosopis Africana biomass material as a conductive thick film paste for electronic applications. *Suleiman Babani, Mohd Hamidon, Alyani Ismail, Haslina Jaafar, INTAN HELINA HASAN, Farah Nabila Shafee, Zainab Yunusa, and Jamila Sumaila*

Increasing Roles And Responsibilities Of Office Technology Manager In Today's Office Work. *Tijjani Umar Liman*

Effect of the adherend material on bonded joint's energy release rates. *Mohamed Yagoub*

### Session No.2

#### TRACK (2)

Auditorium 2, 2nd floor, B105

Chair: Prof. Yasser Mansour

#### Sustainable Construction and Resilient Infrastructure

Dynamic response and non-destructive test of PU-based polymer concrete as repair material supported with SVM model. *Sadi Ibrahim Haruna, Han Zhu, Yasser Mansour, AIB Farouk, Jianwen Shao, Mustapha Abdulhadi, Musa Adamu, and Omar Shabbir Ahmed*

Elevating the High Temperature Performance of Flexi-ble Pavement by Incorporating Plastic Waste. *Ali Qabur, and Hassan Baaj*

Modelling the Buckling Behavior of Reinforced Concrete Silo Incorporating Different Types of Concrete. *Veerendrakumar C Khed, Musa Adamu, Abdulrashid Mulla, Virupaxi D. Gundakalle, and Yasser Mansour*

Innovative Design of Thermal Insulating Green Rendering Mortar for Energy Efficient Buildings. *Hamada Shoukry*

The Potential of Locally Sourced Raw Clay: Optimizing Kaolinite Mineral Transformation to Metakaolinite through Compressive Strength Testing in Mortar and Comprehensive XRD Analysis. *Safiya AL-Shereiqi, Mohammed Seddik Meddah, Khalifa Al-Jabri, Kazi Abu Sohel, and Hamdy Abdel-Gawwad*

Optimizing High Calcium Oxide Calcined Clay as Cement Replacement in Mortar through XRD Analysis and Compressive Strength Development. *Hamed Akindi, Mohammed Seddik Meddah, Khalifa Al-Jabri, yahia Mohamedzein, and Hamdy Abdel-Gawwad*

Development of a Stuffed Whipple Shield for Radiation Protection of Lunar Structures. *T. Tafsirojaman, Scott T Smith, Md Abdur Rakib Rakib, Abdul Hamid Sheikh, Haralambos Rassias, and Jack Evangelista*

Enhancing Thermal properties in Concrete Bricks Using Styrofoam-Wax Mixtures. *Hussain Alsadiq, Galal Almekhlafi, Abdulhamid Alabdullah, Sornia Alfatih, and Hassan Ali*

### Session No.3

#### TRACK (3)

Auditorium 1, Ground floor, B105

Chair: Dr. Dhafer Almakhles

#### Innovations in Renewable Energy: Powering the Future

Advanced Modelling and Control of DFIG-based Wind Turbines: Hybrid System Approach. *Mahmoud Abdelrahim, and Dhafer Almakhles*

Numerical Study on the External Impact of Electric Vehicle (EV) Lithium-Ion Batteries. *Zahraniza Mustaffa*

MPPT technique for Hybrid Solar PV- Battery based DC microgrid in constant power application. *TALAL ALSHARIF, Abdulrahman Ghanem, Prabhakaran Koothu Kesavan, and Umashankar Subramaniam*

Vanadium Redox Flow Batteries: Performance Insights and Innovative Applications for a Greener Future. *Sajid Hussain Qazi*

Numerical Optimization of Electron and Hole Selective layers for PM7:PIDT Bulk-Heterojunctions Solar Cell. *Ammar Qubori, Syed Moiz, Mohammed Alshaikh, and Ahmed Alahmadi*

Development of Efficient, Sustainable, and Eco-Friendly ZnO-based Thermoelectric Materials for Waste Heat Conversion. *Mian Akif Safeen, Mian Kashif Safeen, and Basit Ali*

Synthesis of Heterogeneous Hydrochar-based Acidic Catalyst for Efficient Esterification of Palm Fatty Acid Distillate. *Muhammad Aliyu, and Umer Rashid*

A numerical simulation for PVT system with cascaded channels cooling and ANN model. *Abdullah Alyahya, Meshal Almansour, Salman Aljumaili, Ali Asfour, Fras Alhussein, Nasser Alsodie, Ahmed Hatata, Mohamed Essa, and Mansour Alruqi*

### Session No.4

#### TRACK (4)

PS Hall, B 101, G Floor

Chair: Dr. Ihab Katar

#### Future Cities: Innovative Approaches for a Sustainable Tomorrow

In the Era of Global Boiling: Can Geothermal Pavement Be a Potential Water Desalination Technique for GCC?. *Mohamed Ezzat, and Mansour Loufi*

Indoor Air Quality Monitoring In Educational And Learning Spaces. *Farah Shoukry, Sherif Goubran, and Khaled Tarabieh*

Machine learning based image classification with COREL 1K dataset. *Mohamed Uvaze Ahamed Ayoobkhan, and Ibrahim Abdvokhidov*

Simulating Brick Production Through Discrete Event Simulation as a Zero-Waste Initiative for Sustainable Attainment. *Mazlina Abdul Majid, Aziman Abdullah, Noormazlinah Ahmad, Mohazan Mohamad, and Syahnizam Abdullah Sani*

Digital Twin Technology: Achieving Smartness Within The New Administrative Capital In Egypt. *Samar EL Motasem, and Laila M. Khodeir*

Smart Home Automation in the Internet of Things Era: A Comparative Study of Network Topologies and Communication Protocols. *Moustafa Nasralla*

Assessing the Impact of Sand and Dust Storms on Construction projects timeline and laborers' Health in the State of Kuwait. *Danah Al-Enezi, Al-Anood Al-Enezi, and Ali Al-Dousari*

Analysis of options for decentralized waste disposal for Riyadh. *Abdul Sayeed, and Zakariya Kaneesamkandi*

AI's ethical implications for smart city applications. *Aftab Ara*

## Concurrent Technical Sessions

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### Session No.5



#### TRACK (5)

1-A13, 1st Floor, B 105

**Chair: Dr. Eman Sabry**

#### Sustainable Built Environment Design: Cultural and Historical Perspectives

Sustainable Management as Socio-Economic Challenge in the Context of Cultural Heritage Development. *Marwa Fahmy Abdelalim, Eman Abowardah, AMAI Abbas Abdelsattar, and Wafa Abdelmajeed Labib*

Sustainability Practices to Reduce Material Waste in Construction Design. *Saud Alotaibi, Pedro Martinez-Vazquez, and Charalampos Baniotopoulos*

Sustainable Restoration and preservation of Makhet Castle of the Hejaz Railway, both structurally and culturally. *Mohamed Yassin, and Haitham Rashed*

Sustainable Development Approach to Math Higher-Order Thinking Skills: Culture and Green Technology. *Raoda Ismail, Heri Retnawati, Sugiman Sugiman, and Okky Riswandha Imawan*

Ecosophy applied to Spatial Design for Child Development. A proposal to bridge the Gap between Legislation and Architectural Design. *Beatriz Villanueva*

Work Culture in a Traditional Street's, a case of Chitaroli, Nagpur, India. *Sarika Bahadure*

Comprehensive Sustainable Cultural Heritage Development and Preservation. *Donia Abdelgawad, and Salma Dwidar*

Sustainable Cultural Heritage and Climate Change Challenges from the Perspective of Saudi Arabia's Young People. *Yenny Rahmayati, and Azizah Alwakeel*

Zero Energy Zero problems "Energy Researches National Centre. *Maria Saadeh*

### Session No.6



#### TRACK (6)

1-A18, 1st Floor, B 105

**Chair: Prof. Ibrahim Alhammad**

#### Policies, Regulations, and Economics for Achieving SDGs

Recent Models in Saudi Public Works Contracts. *Ibrahim Alhammad, and Basel Sultan*

Statistical Analysis On Housing Sector. *Abdelhakim Abdelhadi, Abdulrahman Aldhubaiban, Ahmad Alshareef, Fahad Altamimi, and Sami Almajed*

Facilitating Agile Applications in Software Projects in Local Saudi Arabia Companies. *Basel Sultan, Zubair Ahmed Memon, and Meshri Alatik*

Integrating Cob-Earth Material and Sand-Filled Plastic Bottles to Combat Environmental Challenges: A Sustainable Construction Solution. *Mayar Khairy, Zeinab Ahmed, Ahmed Abodonya, Omar El Kadi El Kadi, Khaled Tarabieh, Khaled Nassar, and Ezzeldin Yazeed*

Topic-based Classification and Identification of Global Trends for Blockchain Technology in Agriculture Food Supply Chain Management. *Nor Hasliza Md Saad*

Innovations in Assessment Methods: Computerized Adaptive Testing (CAT) for Sustainable Energy Efficiency. *Okky Riswandha Imawan, Heri Retnawati, Haryanto Haryanto, and Raoda Ismail*

Towards Sustainable Aviation: Commercialization Factors and Indicators for Sustainable Aviation Fuel (SAF). *Marjia Afroz, and M A Parvez Mahmud*

Unpacking Contract Farming: Challenges, Solutions, and the Road to Sustainable Development Goals. *Iva Grgic*

The Need For A Renewed Global Partnership In Addressing Global Challenges. *Aliyu Idris Funtua*