

## Concurrent Technical Sessions

Based on The Technical Session Schedule

### Session No.7

#### TRACK (1)

Auditorium 1, Ground floor, B105

Chair: Dr. Muner Baig

#### Sustainable Manufacturing and Industrial Ecology

4D Printing of Weather Resistant Structures Reinforced with Functionalised Graphene Nanoplatelets. *Mohamad Alsaadi, Eoin Hinchy, Conor T. McCarthy, Tieliydy A. de M. de Lima, Alexandre Portela, Tristan Coudray, and Declan Devine*

Monitoring Manufacturing Plant Emissions based on Equipment Health Index: A Case Study from Oman Oil and Gas Industry. *Khalid Alfahdi, Hakan Gultekin, and Emad Summad*

The Influence of Compaction Pressure in Manufacturing Process to Mechanical and Electrical Properties of LATP Solid Electrolyte. *Bentang Arief Budiman, Siti Zulaikah, Nicholas Putra Rihandoko, Firman Bagja Juangsa, Muhammad Aziz, and Farid Triawan.*

Human Reliability Role in Manufacturing Reliability Management: A Case Study from Oil and Gas Industry in Oman. *Khalid Alfahdi, Hakan Gultekin, and Emad Summad*

Green ZnO Nanoparticles using Olive Plant Extract for Environmental Remediation. *Fares Chabira*

Prediction of bonded strength in a single-lap aluminium joints: artificial neural networks approach. *Abdul Aabid, and Muneer Baig*

Multidisciplinary Optimisation of Power Device Sizing to Improved Flight Duration and Weight Reduction of Solar-Powered Aircraft. *Bashir Safyanu Danjuma*

### Session No.8

#### TRACK (2)

Auditorium 2, 2nd floor, B105

Chair: Dr. Mahmoud Nawar

#### Sustainable Construction and Resilient Infrastructure

Well-confined Concrete Columns Reinforced with BFRP and GFRP Rebars under Concentric Loading. *Nour Ghazal Aswad, Khaled Obeidat, and Farid Abed*

A Sustainable Organized Decision-Making Process for Identifying the Optimal Transportation System in Al-Madinah Al-Munawarah. *Tarek Alhussain, Abdulrahman Marie, Hassan Ali, Isamelden Yousef, and Omar Aldakhil*

Ground Tire Rubber as an aggregate in concrete – A Review and way forward. *Arwa Al-Abri, Muhammad Bilal Waris, Khalifa Al-Jabri, and Kazi Abu Sohel*

Sustainable disposal of waste rockwool in the production of normal and lightweight LC3-based high-performance mortars. *Khalifa Al-Jabri, and Hamada Shouky*

Potential and challenges of advanced manufacturing for rammed earth construction. *Tamanna Jalali, and Lubaina Soni*

Exploring Unconventional Structural Alternatives Incorporating Waste and Recycled Materials for Low-Cost and Low Carbon Emissions Housing. *Mohamed Elnakeb, Marina Mowad, Mohamed Ashmawy, Marwan Shawki, Mohamed Atef, Ehab Abdelhamid, Mohamed Darwish, Mai Haggag, Dania Eldwib, Khaled Nassar, Maram Saudy, Safwan Khedr, Minas Guirguis, and Mohamed Abouzeid*

Future Trends and Opportunities of Artificial Intelligence and Machine Learning in the Resilience of Interdependent Critical Infrastructure Networks in the Kingdom of Saudi Arabia. *Basem Alkhaleel*

Building Construction and Carbon emission for Structural frame. *Saidur Chowdhury, Danish Ahmed, Samar Demayka, Andi Asiz, and Tahar Ayadat*

The Use of InSAR for Monitoring Mechanically-Stabilized Earth Structures to Improve Infrastructure Resilience. *Hamzah Al-Hashemi, Andrew Lees, and Skevi Perdikou*

### Session No.9

#### TRACK (3)

Hall 1-A01, B 105, 1st Floor

Chair: Dr. Umashankar Subramaniam

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

Vibration Control of Offshore Steel Wind Turbines. *Maha Hassan, and Adel Abdelnaby*

Enhancement of Power Quality in Single Phase Systems using Grid Connected Solar Inverter with AQSG Control. *DIVYA R NAMBIAR, Sooraj Suresh Kumar, Manoj Kumar M V, Jayaprakash Pychadathil, Umashankar Subramaniam, and Dhafar Almkhles*

Polydopamine-coated carbon nanodots as filler candidates for fuel cell applications. *Dian Permana, Lukman Atmaja, Arif Priyanga, Yohana Ivana Kedang, Mochammad Purwanto, and Mardi Santoso*

Real-time Energy Efficient Communication for Large-scale Industrial Internet of Things. *Musfira Khan, Muazzam Khattak, Haleem Farman, Asad Malik, and Sher Ramzan*

Enhancing Sustainable Energy Solutions with Wireless Power Transfer in the Era of Electric Mobility. *Mourad Rizk, and Walid Dyab*

Synthesis and Properties of Imidazole Coated Magnetic Particle as Candidate Material for Polymer Electrolyte Membrane Fuel Cell. *Lukman Atmaja, Siti Wafiroh, and Hubbi Nashrullah*

Prediction of Rheological and Filtration Loss Properties of Nano-Zirconium-dioxide Drilling Fluids via Machine Learning Techniques for Energy Exploration. *Cheah Jason, Suhaib Umer Ilyas, Syahrir Ridha, Umara Saher, Mustafa Alsaady, and Shwetank Krishna*

Enhancing The Quality Of Dye Sensitized Solar Cell Fabricated By Doctor Blade Method Using Hibiscus Sabdariffa (Zobo) Natural Dye. *Nuradeen Aliyu Kankia*

### Session No.10

#### TRACK (4)

PS Hall, B 101, G Floor

Chair: Dr. Moustafa Nasralla

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

A Machine Learning-Driven Model for Predicting the Productivity of Internet of Mechanical Things. *Ahmed Sedik, Moustafa Nasralla, and Maged Abdullah Esmail*

Art Preference Evaluation for Pediatric Healthcare Environment in an Egyptian Children's Cancer Hospital. *Nadia Abotaleb, Suzette Aziz, and Ebtesam Elgizawy*

Assessment of Low-Cost Housing in an Urban Area of Khartoum State, Sudan, Towards to a sustainability in Urbanism. *Zeinab Elhassan, Mona D. Abdalrazig, and Selma Hussein*

A Statistical Assessment of Effectiveness of Detection Cameras on Handheld Phone Use While Driving. *Nawaf Alnawmasi*

Urban green space for a sustainable urban environment. *Monalisa Swain, and Sarika Bahadure*

Application Of The Neo-arid City Design Manifesto Towards Sustainable Urban Developments. *Mohammad Fahmy, Bassel Essam, Mohamed Elshafei, and MARWA FAHMY ABDELALIM*

The role of the data analytics for establishing intelligent city. *Walaa M. metwally, and Vitta Ibrahim*

Potable water production from night sky radiation mechanism a model analysis. *Ahmed Algobany, Zakariya Kaneesamkandi, and Abdul Sayeed*

**Concurrent Technical Sessions**
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**Session No.11****TRACK (5)**

1-A13, 1st Floor, B 105

**Chair: Dr. Silvia Mazzetto****Sustainable Built Environment  
Design: Cultural and Historical  
Perspectives**

Heritage Sustainable preservation of traditions. *Silvia Mazzetto*

The Effect of Mosque Acoustic Design and the Surrounding Environment on Prayer's Health. With a Focus on Al Rawdah Neighborhood, in Riyadh city Post Covid-19. *Hind Khogali*

Affordable Housing strategy as a Pillar of Sustainability. The case of Al Jaradiyah, Riyadh. *Monica Moscatelli, and Ranem Abduljabbar*

Sustaining the Legacy of Langkasuka through the Architectural Design of Long-roofed Masjids. *Noor Hanita Abdul Majid, and Siti Aisyah Binti Muhammad*

An Overview of Dust Deposition Effect on Photovoltaic Performance in the Built Environment. *Abubaker Younis, Mohamed Idris, Petru Adrian Coffas, and Daniel Tudor Colfas*

Reshaping Religious Identity in Contemporary Mosque. A comparative analysis in Riyadh. *Mariam Maatouk, and Monica Moscatelli*

Reconciling Urban Resilience And Increasing Digitization-exploring Opportunities And Threats In Jeddah. *Muroj Alghafari*

Building Traditions: Unveiling Hassan Fathy's Vernacular Wisdom in Contemporary Architecture. *Siti Aisyah Binti Muhammad, Noor Hanita Abdul Majid, and Shah Nor Basri*

Sustainable Urban Evolution: VR Prototype for Balancing Quality, Transportation Planning and Green Space Preservation in Al Ain City, UAE. *Sahera Bleibleh, Boshra Hassan, Narmin Abouelkhier, and Nicolas Monje Mejiac*

**Session No.12****TRACK (6)**

1-A18, 1st Floor, B 105

**Chair: Prof. Zlatan Meskic****Policies, Regulations, and  
Economics for Achieving SDGs**

Reconciling Sustainability with Competition Laws – Greenhushing, Greenwashing and Sustainability Agreements. *Zlatan Meskic*

The development of employment relationships through the dynamical processes of employees' psychological contracts. *Maha Alabdulwahed*

Investigating the impact of ESG Index Inclusion Announcement on the Stock Market Performance of the Firm: An Event Study. *Ajaz Ul Islam*

An Innovative Framework for Sustainable Architecture: The challenging case study of Integrating Sustainable Development Goals (SDGs) into Architectural Education in Tunisia. *khansa Dhaouadi*

Linking the Path to Zero Hunger: Analysing Sustainable Development Goals Within the Context of Global Sustainability. *Smita Sharma, Jolly Sahni, and Rosewine Joy*

Risk Prioritization in Software Development Projects Using the Simulation Analytical Hierarchy Process: A Case Study. *Abdulwahab Alhisan, and Ali Ahmed Al-Matouq*

AI with a Heart: Integrating Emotional Intelligence and Sustainability in Smart Education for 21st Century Learners. *Tahira Hoke*

Strategic Placement and Sustainable Practices: Unveiling the Impact of Food Trucks on Urban Dynamics in the UAE. *Khaula Alkaabi, Kashif Mehmood*

SAUDI ARABIA VISION 2030: THINK SUSTAINABLE: Educate valuably – Develop strategically – Lead participatively. *Maria Saadeh*