

ESSD2023 Program



The First International Conference on Engineering Solutions Toward Sustainable Development

Think Sustainable ... Act Responsible

Under the Auspices of



وَزَارَةُ التَّعْلِيمِ الْعَالِيِّ وَالْبَحْثِ الْعِلْمِيِّ
MINISTRY OF HIGHER EDUCATION
AND SCIENTIFIC RESEARCH



Portsaid University

Organized by



Faculty of Engineering



Day 1

2 May 2023

9:30 AM – 10:30 AM

REGISTRATION

10:30 AM - 11:30 AM	OPENING SESSION (Hall A)
	Introduction
	Prof. Rehab F. Abdel-Kader/ Executive Chair <i>Vice-Dean of Graduate Studies & Research</i>
	Prof. Taha E. Farrag/ Conference Chair <i>Dean of the Faculty of Engineering</i>
	Prof. Rawya Y. Rizk/ Conference Chair <i>Vice-President of Graduate Studies & Research</i>
	H.E. Prof. Hesham Arafat Mahdi <i>Vice Chairman of the Board of Trustees of Future University, Chairman of the Board of Directors of MID Bank & Former Minister of Transportation</i>
	H.E. Prof. Ashraf Al-Shehhi <i>President of the Egyptian Chinese University and Former Minister of Higher Education & Scientific Research</i>
	H.E. Dr. Hussein I. El-Atfy

	<i>Secretary-General of the Arab Water Council and Former Minister of Water Resources and Irrigation</i>
	Prof. Ayman M. I. Mohamed/ Conference President <i>President of Port Said University</i>
	Major General Adel Mohamed El Ghadban <i>Governor of Port Said</i>
11:30 AM - 12:00 PM	KEYNOTE SPEAKER SESSION (Hall A)
	Moderators: Prof. Ayman M. I. Mohamed & Prof. Hesham Arafat Mahdi
	Prof. Ashraf Al-Shehhi Title: “Risk Management in Higher Education Institutions”

12:00 PM – 12:30 PM	EXHIBITION OPENING/ COFFEE BREAK
----------------------------	---

12:30 PM - 1:45 PM	KEYNOTE SPEAKERS SESSION (Hall A)
	Building the Future of Egypt: Structural Design and Infrastructure Projects
	Moderators: Prof. Ashraf Al-Shehhi & Prof. Selda Oterkus Prof. Hesham Arafat Mahdi
	Title: “Feasibility of Promoting Transport Infrastructure in Egypt” Prof. Tarek Hassan <i>Principal at the Structural Engineering Department, Dar Al Handasah Consultants, and Professor of Concrete Structures at Ain Shams University</i>

	Title: “Structural Design Considerations for the Iconic Tower in Egypt”
--	---

1:45 PM - 3:00 PM	KEYNOTE SPEAKERS SESSION (Hall A) Sustainable Management of Energy and Water Systems
	Moderators: <i>Prof. Nabil A. S. Elminshawy & Prof. Abdelazim Negm</i>
	<i>Dr. Hussein I. El-Atfy</i> Title: “Enhancing Water Demand Management Towards Achieving Sustainable Development in the Arab Region”
	<i>Prof. Erkan Oterkus</i> <i>Professor in the Department of Naval Architecture, Ocean, and Marine Engineering, University of Strathclyde</i> Title: “Sustainable Development of Energy and Water Systems”

3:00 PM – 3:30 PM	COFFEE BREAK
--------------------------	---------------------

3:30 PM - 4:15 PM	WORKSHOP (HALL A) Faculty of Engineering Research Contributions for Sustainable Development: Strategies and Initiatives
	Moderators: <i>Prof. Islam Amin & Dr. Kamal El-Nahhas</i>
	<i>Prof. Nabil A. S. Elminshawy</i> Title: “Potential of Partially Floating Photovoltaic Technology in Egypt”
	<i>Prof. Rehab F. Abdel-Kader & Dr. Mohamed Abdel-Kader</i>

	Title: “Towards Sustainable Pavement: Utilizing AI for Efficient Pavement Distress Detection”
	<i>Prof. Mohamed Bassyouni</i> Title: “Advanced Research and Testing for Water Treatment Using Membrane Technologies”

4:15 PM - 5:00 PM	KEYNOTE SPEAKERS SESSION (Hall A)
	Moderators: Prof. Rawya Y. Rizk & Prof. Mohamed Abdel-Azim
	<i>Prof. Aboul Ella Hassanien</i> <i>Founder and Chair of the Scientific Research Group in Egypt (SRGE) and Professor at the Faculty of Computer and AI, Cairo University.</i> Title: “Digital Twinning and Artificial Intelligence: Recent Trends and Applications ”
5:00 PM - 5:30 PM	KEY SPEAKERS AND SPONSORS HONORARY CEREMONY

DINNER

END OF DAY 1

Day 2

3 May 2023

9:30 AM – 10:00 AM

REGISTRATION

<p>10:00 AM - 12:00 PM</p>	<p>CLEAN WATER AND SANITATION (Hall A) Session Chair: <i>Dr. Mohamed Elsakka</i></p>	<p>INDUSTRY, INNOVATION & INFRASTRUCTURE (Hall B) Session Chair: <i>Dr. Eman Elshrief</i></p>
	<p>Moderators: <i>Prof. Abdelazim Negm & Prof. Taha Farrag</i></p>	<p>Moderators: <i>Prof. Ahmed El-Hattab & Prof. Islam Amin</i></p>
	<p>“Low-Cost Filter Media for Removal of Hazardous Pollutants from Industry Wastewater Effluents” <i>Nehal M. Ashour</i></p>	<p>“A Comparative Study of Three Winding Configurations for Six-Phase Induction Motors” <i>Basant A. Kalas, Ahmed Refaat, Mahmoud Fawzi, Ayman Samy Abdel-Khalik</i></p>
	<p>“A Review on Wastewater Treatment Using Biodegradable Polymers for Dyes Removal” <i>Rana Gamal, Mohamed Bassyouni, Medhat M. H. ElZahar, Mamdouh Y. Saleh</i></p>	<p>“Survey and Evaluation of Applied Modern Engineering Pedagogy” <i>Omer Alkelany, Hatem Khater, Mohamed Kamal, Hosam E. Mostafa</i></p>
	<p>“Textile Wastewater Treatment Using a Modified Coal Fly Ash as a Low-Cost Adsorbent”</p>	<p>“Examining the Behaviour of Lubricating Oil Film Within Marine Journal Bearing Under Emergency and Critical Operational Conditions”</p>

	<p><i>Ahmed Magdy Eteba, Mohamed Ismail Bassyouni, Amr Mansi, Mamdouh Youssif Saleh</i></p>	<p><i>Nour A. Marey, El-Sayed H. Hegazy, Amman A. Ali</i></p>
	<p>“Removal of Methylene Blue from an Aqueous Solution Using a Surfactant-Modified Activated Carbon” <i>Farid I. El-Dossoki, Osama K. Hamza, Esam A. Gomaa</i></p>	<p>“Enhanced Performance of Propane Refrigerant at LNG Plant During Hot Climate Conditions - Case Study” <i>Usama Eldemerdash, Belal Magdy Abdel Aziz, Naser Safa, Taha E. Farrag</i></p>
	<p>“A Critical Review of Biodegradable Polymeric Reverse Osmosis Membranes” <i>Kareem Fouad, Yasser Elhenawy, Medhat A. El-Hadek, M. Bassyouni</i></p>	<p>“Ship Design for Green Ship Recycling - A New Approach” <i>Bahgat M. Walid, El-Sayed Hegazy, Heba S. El-Kilani, Amman Ali, Mostafa M. Mostafa</i></p>
	<p>“Artificial Intelligence for Predicting the Performance of Adsorption Processes in Wastewater Treatment: A Critical Review” <i>Mohammad Mansour, M. Bassyouni, Rehab F. Abdel-Kader, Y. Elhenawy, Lobna A. Said, Shereen M. S. Abdel-Hamid</i></p>	<p>“Analysis of the Time Multiplexed Sampling and a Proposed Prototype for Effective Heterogenous Data Acquisition Systems” <i>Omer Alkelany</i></p>
	<p>“Saline Water Desalination Using Direct Contact Membrane Distillation: A Theoretical and Experimental Investigation” <i>Yasser Elhenawy, Kareem Fouad, Thokozani Majozi, Shereen M. S. Abdel-Hamid, Mohamed Bassyouni</i></p>	<p>“Condition Monitoring as a Pathway for Sustainable Operation: A Case Study for Vibration Analysis on Centrifugal Pumps” <i>Mahmoud Mostafa, Mohamad Elsakka, Mohamed S. Soliman, Mohamed El-Ghandour</i></p>

	<p>“Tanneries Wastewater Treatment by Coagulation and Reverse Osmosis” <i>A. Essam, M. Bassyouni, Mamdouh A. Gadalla, Fatma H. Ashour</i></p>	<p>“Preliminary Evaluation of Experiential Learning in Engineering Pedagogy for Undergraduate Students Learning Logic Design Concepts” <i>Omer Alkelany, Hatem Khater, Mohamed Kamal, Hosam E. Mostafa</i></p>
	<p>“Utilization of Fly Ash in Wastewater Treatment: A Review” <i>Medhat M. H. ElZahar, Mohamed Bassyouni, Mayada M. Gomaa, Mohamed Z. El-Shekhiby, Mamdouh Y. Saleh</i></p>	<p>“Mode-I Crack Problem in Generalized Thermo-Microstretch with Harmonic Wave Under Three Theories by Using a Laser Pulse with Non-Gaussian Form Temporal Profile” <i>Wafaa Hassan, Khaled Lotfy</i></p>
	<p>“A Critical Review of Bilgewater Treatment” <i>Maggie Gad, A.E Mansi, Noran Ashraf, Y. Elhenawy, M. Bassyouni</i></p>	<p>“Materials Selection and Performance of Fiber-Reinforced Plastic Poles” <i>M. Bassyouni, Yasser Elhenawy, Yuliya Kulikova, Olga Babich, Medhat A. El-Hadek</i></p>
	<p>“Assessing the Performance and Fouling of Polytetrafluorethylene Hydrophobic Membrane for the Treatment of Oil-Polluted Seawater Using AGMD” <i>A.E. Mansi, Y. Elhenawy, Maggie Gad, Noran Ashraf, Ahmed Eteba, M. Bassyouni</i></p>	<p>“Maximization of Condensate Production in Gas-Oil Separation Plant in Gulf of Suez: Case Study” <i>Mamdouh A. Gadalla, Ahmed A. Elsheemy, Hany A. Elazab, Thokozani Majazi, Fatma H. Ashour</i></p>
	<p>“Treatment of Printing Ink Wastewater Using Natural and Synthetic Coagulants” <i>Menna Eid, S. M. El-Marsafy, M. Bassyouni</i></p>	<p>(Poster): “The Hysteresis in the Stoner-Wohlfarth Model of Ferromagnetism” <i>Wafaa Hassan</i></p>

	<p>“Modified Activated Carbon for Adsorptive Removal of Para-Nitrophenol from Industrial Wastewater (IWW)”</p> <p><i>Usama N. Eldemerdash, Taha E. Farrag, Sherine A. Abdelkader</i></p>	
--	---	--

12:00 PM – 12:30 PM	COFFEE BREAK
----------------------------	---------------------

12:30 PM - 3:00 PM	<p>CLEAN ENERGY (Hall A) Session Chair: Dr. Asmaa Rady Ahmed</p>	<p>SMART CITIES AND COMMUNITIES (Hall B) Session Chair: Dr. Basma Nashaat</p>
	<p>Moderators: Prof. Erkan Oterkus & Prof. Nabil A. S. Elminshawy</p>	<p>Moderators: Prof. Naglaa Megahed & Prof. Heba M. Abd El Atty</p>
	<p>“An Efficient MPP Tracker Based on Flower Pollination Algorithm to Capture Maximum Power from Proton Exchange Membrane Fuel Cell”</p> <p><i>Ahmed Elbaz, Ahmed Refaat, Nikolay Korovkin, Abd-Elwahab Khalifa, Ahmed Elsayed Kalas, Mohamad Elsakka, Hussien M. Hassan, Medhat Elfar</i></p>	<p>“Sustainable Development: A Review of Concepts, Domains, Technologies, and Trends in Smart Cities”</p> <p><i>Mohamed Elnahla, Hossam Wefki</i></p>
	<p>“Experimental Investigation of Two Bio-Inspired MPPT Algorithms for Partially Shaded PV Arrays”</p> <p><i>Abd-Elwahab Khalifa, Medhat Elfar, Qays Adnan Ali, Ahmed Elbaz, Ahmed Elsayed</i></p>	<p>“Sustainability of Lap Splice in Externally near Surface Mounted Bars of Reinforced Concrete Beam”</p> <p><i>Khaled F. Khalil, Mohamed A. Farouk, Azza I. Anan</i></p>

	<p><i>Kalas, Mohamad Elsakka, Nikolay Korovkin, Ahmed Refaat</i></p>	
	<p>“Numerical and Experimental Investigation on Integrated Solar Chimney for Seawater Desalination System in Egypt”</p> <p>Mohamad Elsakka, Islam Amin, Erkan Oterkus, Selda Oterkus, Moustafa Aboelfadl, Mohamed Elsayed <i>Abdelfattah</i>, Omar Nimr, Amr A. Sayed Alahl, Dalia Abouzaid, Hossam Shawky</p>	<p>“The Behavior of the Aluminum Bridges”</p> <p><i>Ola. Elsaid, Azza I. Anan, Mohamed M. Badawy</i></p>
	<p>“In-Situ Fabrication of Poly (M-Phenylene Isophthalamide)/ Fluorographene Nanocomposites and Their Properties”</p> <p><i>Lina M. Elbayar, Mahmoud Abdelaty, Shaban Nosier, Abbas Anwar Ezzat, Fathy Ahmed Shokry</i></p>	<p>“Risk Categorization for Various Project Delivery Methods in Construction Sector”</p> <p><i>Ibrahim Mahdi, Ahmed Mohamed Abdelkhalig, Hassan Mohamed Hassan, Ehab Rashad Tolba, Lamisse Raed</i></p>
	<p>“A Comprehensive Review of Biomass Pyrolysis to Produce Alternative Biofuel”</p> <p><i>Yasser Elhenawy, Kareem Fouad, Mohamed Bassyouni, Mamdouh Gadalla, Fatma H. Ashour, Thokozani Majazi</i></p>	<p>“Seizure Detection Using Fast Walsh-Hadamard Transform (FWHT)”</p> <p><i>Saly Abd Elateif El Gindy, Ayman Ahmed, Saad Elsayed</i></p>
	<p>“A Modified Model Predictive Speed Control Based on Sensorless Hybrid MPPT Algorithm in Wind Turbine Systems”</p>	<p>“Improving Smart Infrastructure Monitoring Systems as a Response to Prevalent Pandemic”</p>

	<p><i>Mai N. Abuhashish, Ahmed A. Daoud, Ahmed Refaat, Medhat Elfar</i></p>	<p><i>Nourhan Osama, Ahmed Magdy, Bassem El Hady, Khaled Abd EL Salam</i></p>
	<p>“A Review of Ventilation Systems for Efficient Energy Use” <i>Asmaa Ahmed, Mohamad Elsakka, Ayman Mohamed</i></p>	<p>“Parametric Form-Finding in Architecture: Dimensions Classification and Processes Guidelines” <i>Lina A. Ramadan, Ashraf El Mokadem, Nancy Badawy</i></p>
	<p>(Poster): Abstract: “Recent Progress in Vertical Axis Wind Turbine Research: Modelling and Optimizations” <i>Mohamad Elsakka, Yasser Elhenawy, Ahmed Refaat, Gamal H. Moustafa, Jee Loong Hee, Lin Ma</i></p>	<p>“Performance Analysis of Emerging Multi-Carrier Waveforms for 6G Wireless Communications” <i>Walid Raslan, Heba Abdel-Atty</i></p>
	<p>(Poster): “Performance Analysis of a Green Hydrogen Production System in Several Coastal Locations in Egypt” <i>Mohamad Elsakka, Ahmed Refaat, Asmaa Ahmed, Ahmed E Amer, Ahmed Elsheikh, Medhat Elfar, Yasser Elhenawy, Nidiana Rosado Hau, Thokozani Majozi, Islam Amin, Selda Oterkus, Erkan Oterkus, Ayman Mohamed</i></p>	<p>“Post-Pandemic Active Learning (PPAL): A Framework for Active Architectural Education” <i>Asmaa M Hassan, Basma N. El-Mowafy</i></p>
	<p>CLIMATE ACTION (Hall A) Session Chair: Dr. Rabab F. Abdel-Kader</p>	<p>“Efficient Deep Deblurring Technique Using Dark and Bright Channel.” <i>Nouran Ali, Asmaa Abdallah, I. F. Elnahry, Randa Atta</i></p>

	<p>Moderators: Prof. Selda Oterkus & Dr. Heba Y. Soliman</p>	<p>“Investigating the Performance of Indoor Daylighting, and Thermal Performance in Residential Buildings Using Productive Façades”</p> <p><i>Basma Nashaat El-Mowafy</i></p>
	<p>“Field Measurements Used to Validate Envi-MET and Conduct Sensitivity Analysis, in Egypt.”</p> <p><i>Esraa Ebrahiem Salim, Naser Fawzy Ramadan, Mohamed Saad Mohamed Saad</i></p>	<p>“Real-Time Facial Emotion Recognition Using Haar-Cascade Classifier and MobileNet in Smart Cities”</p> <p><i>Shereen El-Shekheby</i></p>
	<p>“Assessing Climate Change of Western Delta by Regional Climate Models”</p> <p><i>Sherien Zahran, Randa Farag, Mohamed M. F. Sobeih, Esam Helal</i></p>	<p>“Enhanced COVID-19 Classification Using Ensemble Meta-Algorithms on Chest X-Ray Images”</p> <p><i>Lamiaa Menshawy, Ahmad H. Eid, Rehab F. Abdel-Kader</i></p>
	<p>“Maximizing Energy Efficiency in Petroleum Refining: Case Study - Delayed Coker Unit in an Egyptian Refinery”</p> <p><i>Mohamed Shahin, Hany A. Elazab, Mamdouh Gadalla, Thokozani Majozi, Fatma Ashour</i></p>	<p>“Building Strategy of City Branding as a Tool to Achieve Sustainable Development (Case Study: Branding of Port-Said City)”</p> <p><i>Shaimaa R. Nosier, Nancy M. Badawy</i></p>
	<p>“A Systematic Methodology for Retrofit Analysis of Refineries Preheat Trains with Variable Heat Capacity and Exchangers Fouling”</p>	<p>(Poster): “The Role of Perforated Building Envelopes in Sustainable Design”</p> <p><i>Marwa Gamal Ahmed Fawaz, Naglaa Ali, Dalia Elghezawy, Basma Nashaat Ali</i></p>

	<p><i>Haya Kaled, Hany A. Elazab, Mamdouh Gadalla, Thokozani Majazi, Osama Abd El-Baari, Fatma Ashour</i></p>	
	<p>“Parametric Urbanism in Optimising Outdoor Thermal Comfort of Urban Spaces” <i>Nancy Badawy, Maram Waleed Rezk, Ashraf El Mokadem, Heba Adel Ahmed Hussein</i></p>	<p>(Poster): “Utilizing Deep Reinforcement Learning for Resource Scheduling in Virtualized Clouds.” <i>Mona Nashaat, Heba Nashaat</i></p>
	<p>“Optimal Design of Container Ships Geometry Based on Artificial Intelligence Techniques to Reduce Greenhouse Gases Emissions” <i>Hussien M. Hassan, Mohamed M. Elsakka, Ahmed Refaat, Ahmed E. Amer, Rawya Y. Rizk</i></p>	<p>(Poster): “Questions Concerning the Role of the Skycourt as a Passive Strategy to Enhance Energy Efficiency.” <i>Rasha A Ali, Naglaa A Megahed, Asmaa M Hassan, Merhan M Shahda</i></p>
	<p>“Exploring the Regulatory Framework of Maritime Decarbonization to Achieve IMO GHG Emission Targets” <i>Nourhan I. Ghoneim, Arife Tugsan Colak, A. M. Amer</i></p>	
	<p>"Contrasting the Water Consumption Estimation Method: Case of USA and South Africa" <i>Etienne Alain Feukeu, Lucas W Snyman</i></p>	

	<p>(Poster): “An Overview of LCA Integration Methods at the Early Design Stage Towards National Application” <i>Sally R. Hassan, Naglaa A. Megahed, Osama M. Abo Eleinen, Asmaa M. Hassan</i></p>	
	<p>(Poster): “How Urban Morphology Affects Energy Consumption and Building Energy Loads? Strategies Based on Urban Ventilation” <i>Sarah G. Aboria, Osama M. Abo Eleinen, Basma N. El-Mowafy, Asmaa M. Hassan</i></p>	
	<p>(Poster): “Sustainability Research at Port Said University Towards the Achievement of the Sustainable Development Goals.” <i>Mohamed M. Elsakka, Mohamed Bassyouni, Rawya Y. Rizk, Ayman M. I. Mohamed</i></p>	
<p>3:00 PM - 3:30 PM</p>	<p>BEST PAPER AWARDS AND CLOSING SESSION</p>	

END OF DAY 2

SPONSERS

Official Partner



Golden Partner



Bronze Partner

