



2ND CONFERENCE

THE POWER OF TECHNOLOGY: SHAPING THE FUTURE OF ENGINEERING

23 DECEMBER 2025



Main Theater



Hall A



Hall 408, Hall 409

PROGRAM

CONFERENCE PROGRAM

09:00 – 10:00	Registration
10:00 – 10:20 Welcome and Conference Opening Main Theater	<p>Prof. Dr. Ashraf Yahia Conference Rapporteur for Graduate Studies Activities and Vice Dean for Graduate Studies and Research</p> <p>Prof. Dr. Fahmy Salah Conference Rapporteur for Education and Students Activities and Vice Dean for Education and Student Affairs</p> <p>Prof. Dr. Zeinab Faisal Abdel-Qader Dean of the Benha Faculty of Engineering, Benha University (Conference Chair).</p> <p>Prof. Dr. Gehan Abdel-Hady Vice President for Graduate Studies and Research, Benha University</p> <p>Prof. Dr. Nasser El-Gizawy President of Benha University</p>
10:20 – 10:30 Main Theater	SHORT VIDEO ABOUT BENHA FACULTY OF ENGINEERING
10:30 – 10:50 Main Theater	HONORING FORMER DEANS OF THE FACULTY
First Session Main Theater	<p>Session Chair: Assoc. Prof. Dr. Sameir Hammad Associate Professor of Architecture, Architecture Engineering Department</p>
10:50 – 11:20	<p>Prof. Dr. Abdel-Khalek El-kady Assistant Minister of Housing for Technical Affairs "National Strategy in Urban Innovation and Sustainable Urban Planning"</p>
11:20 – 11:50	<p>Prof. Dr. Mohammed Fahmy Professor of Architecture and Sustainable Urban Environment and Founder of the Center for Urban Environment Governance and Sustainability at the Military Technical College. "Digital Twin Technology Applications in Egyptian Urbanism"</p>
11:50 – 12:00	Break
Second Session Main Theater	<p>Session Chair: Assoc. Prof. Dr. Ahmed Elsaadany Associate Professor of Architecture, Architecture Engineering Department</p>
12:00 – 12:20	<p>Prof. Dr. Wael Badawy Professor of Artificial Intelligence, Egyptian Russian University "Shaping the Future: Cutting-Edge Directions in Artificial Intelligence"</p>
12:20 – 12:40	<p>Prof. Dr. Ibrahim Madany Professor of Environmental Architecture and CEO of GAT "Environmental Architecture: Between Reality and Aspiration"</p>
12:40 – 1:00	BREAK

1:00 – 2:00 Main Theater	Honoring Ceremony
Third Session Online Session – Hall A	Session Chair: Prof. Walaa Gabr
1:00 – 1:30	Prof. Dr. A. J. Han Vinck Professor of Digital Communications, University of Duisburg-Essen, Germany, and Former President of the IEEE Information Theory Society “Coding and Information Theory”
1:30 – 2:00	Assoc. Prof. Dr. Shinsuke Mori Associate Professor, Department of Chemical Science and Technology, Institute of Science Tokyo “Energy Storage via CO ₂ Conversion and N ₂ Fixation Using SOEC–Plasma Hybrid Reaction Systems”
2:00 – 2:30	Break
Hall 408, Hall 409 2:30 – 5:00	Parallel Sessions
Workshop - Hall A	Prof. Ashraf Yahia Benha Faculty of Engineering, Benha University
3:00 – 5:00	Dr. Haitham Azmy Microelectronics Department, Electronics Research Institute “Think It, Model It, Code It: Mastering System Modeling and Verilog Realization”

RESEARCH SESSIONS

Hall: 409

Track: Civil and Architectural Engineering

Session Chairs: Prof. Hala Mohamed Refaat & Asst. Prof. Almoataz Gamal Eldin

Time: 2:30 - 5:00

2:30-2:45	Review on physical modeling of scouring downstream compound weirs	Mohamed A. Zidan	Civil Engineering
2:46-3:01	Evaluation of Seismic Separation Distance of the ECP Using Nonlinear Time History Analysis	Mohamed Ahmed Abd El-Aziz	Civil Engineering
3:02-3:17	Enhancing Mechanical Performance and Durability of Rigid Pavements Using Fly Ash and Basalt Fiber: Experimental and Numerical Assessment	Abdalmajid Mohammed Sadeq	Civil Engineering
3:18-3:33	Finite Element Parametric Analysis of Torsional Behavior in Fibrous Reinforced Concrete Corbels	Osama Mohamed Anwar	Civil Engineering
3:34-3:49	Adaptive Architecture in the Face of Climate Change: Towards a Resilient and Future-Oriented Design Approach	Aya Mohamed Shaheen	Architectural Engineering
3:49-4:04	Modular Construction as a Tool for Achieving Smart Buildings in Egypt	Esraa Aidy	Architectural Engineering
4:05-4:20	Visual Identity in the Era of AI Technologies - Case Study of Benha City	Sameir Mohamed Hammad	Architectural Engineering
4:21-4:36	Integrating Artificial Intelligence and Community Participation to Improve Visual Quality in Educational Environments	Menna Mounir	Architectural Engineering
4:36-4:51	The Impact of Converting Residential Buildings into Kindergartens on Stimulating the Child's Imaginative Abilities	Zeinab Atef Qasemy	Architectural Engineering

RESEARCH SESSIONS

Hall: 408

Track: Electrical Engineering, Mechanical Engineering Tracks: and Basic Sciences

Session Chairs: Prof. Ali Mahmoud Attia & Asst. Prof. Mohamed El Sisy

Time: 2:30 - 5:00

2:30-2:42	Optimized Hybrid Ensemble Learning Framework for Diabetes Prediction Incorporating PCA, RFE, ADASYN, and SHAP Explainability	Nadeen Fouad	Electrical Engineering
2:43-2:55	A Comprehensive Analysis of the Influence of FDM Process Parameter Optimization on Surface Roughness	Tarek Ahmed Elattar	Mechanical Engineering
2:56-3:08	Integrating MCDM Approaches into Modern Quality Control: A Review of Methods, Challenges, and Industry 4.0 Synergies	Tarek Ahmed Elattar	Mechanical Engineering
3:09-3:21	Friction Stir Welding - Application Review	Ali Mahmoud	Mechanical Engineering
3:22-3:34	Multi-Criteria Decision Making (MCDM) in Non-Traditional Machining (NTM): A Review	Ibrahim Ahmed Elshafey	Mechanical Engineering
3:35-3:47	Process Capability Assessment in Friction Stir Welding: A Data-Driven and AI Integrated Perspective	Ibrahim Sabry	Mechanical Engineering
3:48-4:00	Continuum Robots - Design Principles, Modeling Approaches, and Hybrid Actuation Advances: A review	Abdelmaged Elsayed	Mechanical Engineering
4:01-4:13	A Framework to Enhance Green Factories by Applying Lean Production Concepts -A review	Ibrahim Ahmed Elshafey	Mechanical Engineering
4:14-4:26	Multi-Objective Ablution System Design Analysis	Roubi Abdelsattar	Mechanical Engineering
4:27-4:39	The Industrial Applications of Artificial Bee Colony Algorithm: Definition, Equations, Advantages, Disadvantages, and Applications	Hala Saeed	Basic Sciences
4:40-4:52	A Comparative Study of Salsa20 and ChaCha20 Stream Cipher Algorithms for Image Encryption	Ayman Esam	Basic Sciences