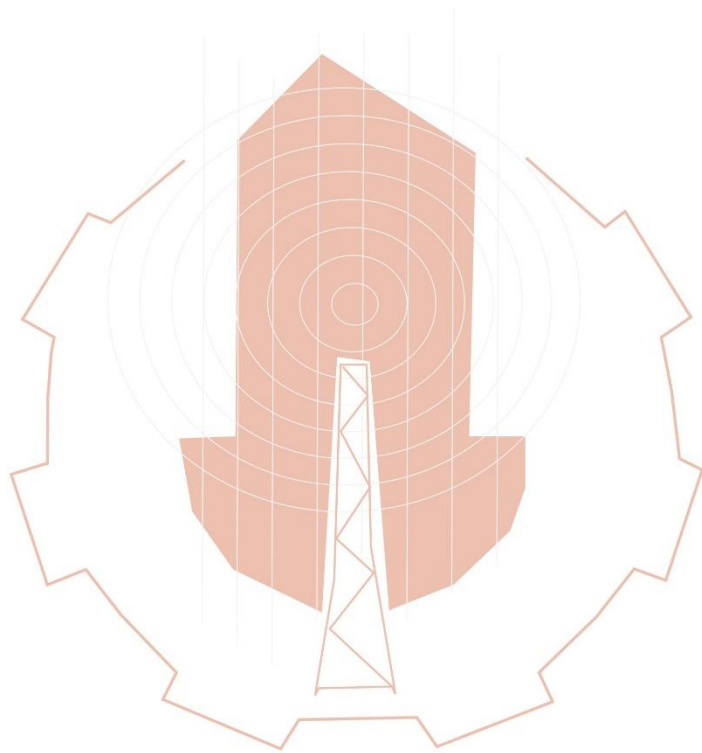




JOURNAL OF ENGINEERING RESEARCH

Refereed and issued twice annually by the
Faculty of Engineering - University of Tripoli



Issue 38 November 2024



Contents

المحتويات

Research Papers in English

- 1- Optimizing Grid Stability: Power System Stabilizer Tuning with Genetic Algorithms
Nouri Ali Daw Khalifa, Ahamd Arara and Hossam Elost **1**
- 2- Effecting Beliefs of the Place on Ancient Yemeni Architecture in The Period Before Islam
Ahmed Abdurabu AL-Nehmi **15**
- 3- A Solver-TOPSIS Technique for Multi-Objective Optimization of Innovative Multi-Stage VCR Systems by Using Microsoft Excel
Mohamed M. El-Awad **25**
- 4- Utilizing Excel Solver for Complex Pipe Network Analysis and Development of an Educational Tool
Nasreddin N. Al-Zalitani and Esam M. Hamza **43**
- 5- Investigating the Influence of Certain Parameters on the Dynamic Characteristics of a Composite Wing Structure
Marwa L. Agela and Gamal M. Ashawesh **55**
- 6- Spectral Analysis of Diffusion Flame Dynamics with Fuel Excited and Its Interaction with an Acoustically Rijke Tube
Hajer M. Mayo, Hanan M. Edawi, Saad I. Al-Bourki and Salem A. Farhat **69**

الأوراق البحثية باللغة العربية

- 1- التحليل المكاني لحوادث المرور باستخدام نظم المعلومات الجغرافية
علي إمام محمد بن سعيد ورشيد بشير الغريب



Editorial Board:

Mohamed Saleh Oun, PhD

*Professor, Department of Mechanical and Industrial Engineering,
Faculty of Engineering, University of Tripoli*

E-mail: jer.editorinchief@uot.edu.ly

Ayad Ali Abulwahed, PhD

*Professor, Department of Materials and Metallurgical Engineering,
Faculty of Engineering, University of Tripoli*

E-mail: a.abdulwahed@uot.edu.ly

Abubaker Mohamed Abushofa, PhD

*Professor, Department of Electrical and Electronic Engineering,
Faculty of Engineering, University of Tripoli*

E-mail: a.abushofa@uot.edu.ly

Wajdi Mohamed Ratemi, PhD

*Professor, Department of Nuclear Engineering,
Faculty of Engineering, University of Tripoli*

E-mail: w.ratemi@uot.edu.ly

Ali Ahmed Elkebir, PhD

*Professor, Department of Civil Engineering,
Faculty of Engineering, University of Tripoli*

E-mail: ali.elkebir@uot.edu.ly

Ahmad Abdussalam Al-Makhlufi, MSc

*Assistant lecturer, Department of Aeronautical Engineering,
Faculty of Engineering, University of Tripoli*

E-mail: a.al-makhlufi@uot.edu.ly

Hamida Milad Al-Tumi, MBA

Editorial Secretary, Faculty of Engineering, University of Tripoli

E-mail: h.tumi@uot.edu.ly

Disclaimer:

Papers published in this journal do not necessarily represent the views of the Editorial Committee or the Faculty of Engineering, University of Tripoli. All ethical and scientific responsibilities fall directly on the authors.

Address:

The Editorial Committee
Journal of Engineering Research
P.O. Box 13589,
Faculty of Engineering
University of Tripoli, Tripoli, Libya
E-Mail : jer.editorinchief@uot.edu.ly
Web Site : www.jer.ly