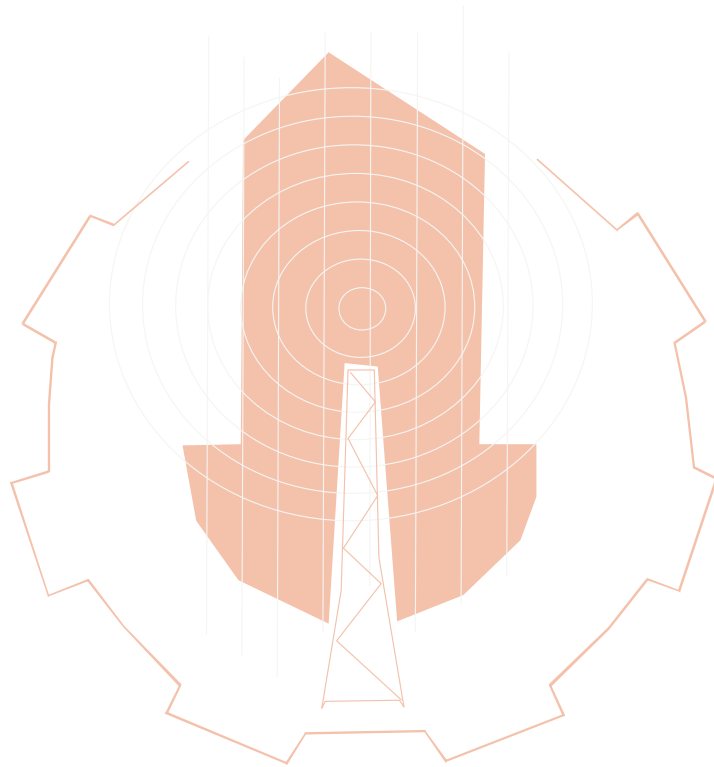




# JOURNAL OF ENGINEERING RESEARCH

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



**Issue 25 March 2018**



## Contents

## المحتويات

### Research Papers in English

- 1- Quality Enhancement for Improving the Processes of Making Decisions Within Libyan Operating Oil and Gas Companies  
*Rajab Abdullah Hokoma and Hanan Zawam Aburas* 1
- 2- Acoustic Emission Observation of Ultimate Elastic Wall Stress (UEWS) Test Under Pure Hydrostatic Pressure for Glass Reinforced Epoxy Pipe (GRE) PIPES  
*Tarak Assaleh, Asya A. Gabbasa and Siddig Dabbashi* 9
- 3- In Vivo Entrance Dose Measurements in Head and Neck Cancer Treatment Using Thermoluminescent Dosimeters  
*Abobaker El-Toomi, Abir El-Bousefi and Abdurazk El-Megrab* 19
- 4- Automotive Engine Muffler Performance Measurements  
*Entesar H. Betelmal, Fatiam M. Elafi, Salem A. Farhat and Mohamed K. Taleb* 29
- 5- Stress Analysis of Aircraft Fuselage Structures  
*Gamal M. Ashawesh, Asala A. Alzanati and Adel A. Kurban* 41
- 6- Heat Transfer Enhancement in Turbulent Flows Utilizing Nanofluids  
*Elhassen A. A. Omer and Saleh Basha Alkhodari* 55
- 7- Experimental and Theoretical Investigation of Soil Temperature Profiles During Solarization of Mulched and Bare Soil  
*Bashir H. Arebi, Milod Z. Azzabi and Seraj A. Ahmed* 69
- 8- Virtual Reality Animation of Anfis Controller for Mobile Robot Stabilization  
*Ahmed J. Abougarair* 85

### الأوراق البحثية باللغة العربية

- 1- مقاومة الصدم وسلوك التشغيلية للخرسانة ذاتية الدمك  
*الصادق اعبيد عبدالله وعبدالرحمن محمد عوض ومحمد فتحي ابوكلوب* 1
- 2- مفاهيم إعادة هندسة العمليات وإمكانية تطبيقها لتحسين مستويات أداء المؤسسات (دراسة حالة جامعة طرابلس-الجزء الأول)  
*رجب عبد الله حكومة ورجاء البديري بن زقلام* 13
- 3- تقييم وتحليل وتطوير كفاءة خدمات الطوارئ في مدينة غزة باستخدام نظم المعلومات الجغرافية  
*علاء الدين الجماسي وهمام أبو دراز وعمر السراج وزهير الهواري* 27



## Instructions for the Authors

The Journal of Engineering Research accepts original papers written in either Arabic or English languages. Papers must be typed using **Microsoft Word** on A4 paper in accordance with the instructions outlined hereunder and submitted to the editorial committee electronically (on CD or USB) in addition to two hard copies.

### The paper contents should follow the outline below:

**Paper Title, Author(s) name(s)** followed by their **address(s), Abstract (English), Abstract (Arabic), Introduction, Materials and Methods, Discussion of Results, Conclusions, Acknowledgement, References.**

### Typing Instructions:

Authors are kindly requested to abide by the following instructions:

#### Page Setup:

**Size:** Custom 200 mm by 285 mm

**Margins:** 25 mm from all sides

**Layout:** header and footer 12.5 mm

**Font type:** \* **Arabic:** Simplified Arabic \* **English:** Times New Roman

#### Font size: As outlined in the following Table

	Arabic	English	Bold
<b>Paper title</b>	16	14 Capital	Yes
<b>Authors names</b>	14	12	Yes
<b>Addresses</b>	13	11	No
<b>Main headings</b>	14	12 Capital	Yes
<b>Sub-headings</b>	13	11	Yes
<b>Text</b>	14	12	No
<b>Figures titles</b>	13	11	Yes
<b>Tables titles</b>	13	11	Yes
<b>Equations</b>	Use same font size for all equations		No

### Figures and Tables

All figures and tables should be prepared using Word or any other compatible program, numbered sequentially in the paper and referred to in the text by their numbers. A space should be left above and below all figures and tables to separate them from the text.

### References

References should be written according to the standard practices (Author's last name, first initial, title, volume no., year, and pages numbers) and referred to by their numbers in the references list.

### Refereeing

All papers received by the editorial committee will be forwarded to scientific referees from related fields; the committee will take the decision for publication based on the recommendation of the referees.

**Important Note:** Papers not written according to instructions stated above will not be considered for refereeing.



**Editorial Committee:**

Dr. Neffati Moamer Rouai  
Dr. Ayad Ali Abdulwahed  
Dr. Mohamed Saleh Oun  
Hameda M. Eltumi (Secretary)

**Invitation (Call for Papers)**

The Editorial Committee invites teaching staff members, postgraduate students, engineers, researchers and all those concerned with engineering and technology fields to submit their research work to be published in the journal. The main fields targeted by the Journal are:

- All theoretical and applied engineering disciplines
- Engineering and technology education
- Technical and engineering translations (or Arabization)
- Technology adaptation and transfer
- Postgraduate research
- Any other related fields

**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 : [info@jer.edu.ly](mailto:info@jer.edu.ly)**  
**Website: [www.jer.edu.ly](http://www.jer.edu.ly)**

