**College of Engineering University of Baghdad**

**Editorial Board**

|  |  |  |
| --- | --- | --- |
| ***Chief Editor*** | | |
| **Prof Dr. Basma Abbas Abdulmajeed** | **College of Engineering** | **University of Baghdad** |
| ***Managing Editor*** | | |
| ***Asst. Prof Dr. Ammar A. Farhan*** | | |
| ***Members*** | | |
| **Prof Riadh Saleh Al-Mahaidi** | **Dept. of Civil Engineering** | **Swinburne University of Technology** |
| **Associate Prof Nader Parvin** | **Dept. of Mining and Metallurgy** | **Amirkabir University of Technology, Tehran Polytechnique** |
| **Prof Dr. Zainab Ziad Ismail** | **Dept. of Environmental Engineering** | **University of Baghdad**  **College of Engineering** |
| **Prof Dr. Bushra Suhale Zbar** | **Dept. of Civil Engineering** | **University of Baghdad**  **College of Engineering** |
| **Asst. Prof Dr. Inaam Ameen Albazzaz** | **Dept. of Architecture Engineering** | **University of Baghdad**  **College of Engineering** |
| **Asst. Prof Dr. Sameera M. Hamad-Allah** | **Dept. of Oil Engineering** | **University of Baghdad**  **College of Engineering** |
| **Asst. Prof Dr. Firas Mohammed Tuaimah** | **Dept. of Electrical Engineering** | **University of Baghdad**  **College of Engineering** |
| **Asst. Prof Dr. Nadia Adnan Shiltagh** | **Dept. of Computer Engineering** | **University of Baghdad**  **College of Engineering** |
| **Asst. Prof Dr. Issam Mohammed Ali Aljubury** | **Dept. of Energy Engineering** | **University of Baghdad**  **College of Engineering** |
| **Asst. Prof Dr. Maythm M. Sharky** | **Dept. of Surveying Engineering** | **University of Baghdad**  **College of Engineering** |

**Scientific Consultant Committee**

|  |  |  |
| --- | --- | --- |
| ***Members*** | | |
| **Prof Dr. Saba Jabbar Neamah Al khafaji** | **College of Engineering** | **University of Baghdad** |
| **Prof. Dr.Saleem Mohammed Ridha Ali Taha** | **College of Engineering** | **University of Baghdad** |
| **Prof.Dr.Ala Nasir ALjorany** | **College of Engineering** | **University of Baghdad** |
| **Prof.Dr.Yasin Khdear Salman** | **College of Engineering** | **University of Baghdad** |
| **Prof. Dr. Hussein Yousif Mahmood** | **College of Engineering** | **University of Baghdad** |
| **Prof. Dr. Riyadh Zuhair Al Zubaidy** | **College of Engineering** | **University of Baghdad** |
| **Prof Dr. Raad Sami Fyath** | **College of Engineering** | **Al – Nahrin University** |
| **Prof Dr. Shihab Ahmed Shamma** | **School of Engineering** | **University of Maryland** |
| **Prof Dr. Qassim Nasir** | **College of Engineering** | **Sharjah University** |
| **Prof Dr. Marwan Suliman Mousa** | **Dep. Of Physics** | **Mu'tah University** |
| **Prof Dr. Eyad Hassan Abed** | [**Department of Electrical and Computer Engineering**](http://www.ece.umd.edu/) | **University of Maryland** |
| **Prof Dr. Hassan Al-Nageim** | **Civil Eng. Dept.** | **Liverpool John Moores University** |
| **Prof Dr. Taju alarifin Bin Musa** |  | **University of Technology- Malaysia** |
| **Prof Dr. Elamin Alkanzi** | **Chemical Eng. Dept.** | **University of Bahrain** |
|  |  |  |
|  |  |  |
|  |  |  |
| ***Staff of the Journal*** | | |
| **Rafel M. Ali** | | |
| **Roaa Ahmed Kadhim** | | |

**The Journal of Engineering is a Monthly Refereed Periodic**

**THE EDITOR**

**COLLEGE OF ENGINEERING**

**UNIVERSITY OF BAGHDAD**

**P. O. BOX 47024 JADERIYAH**

**BAGHDAD – IRAQ**