

ISSN: 2164-0165 Volume 14, Number 3, August 2024



Modern Mechanical Engineering



ISSN: 2164-0165



<https://www.scirp.org/journal/mme>

Journal Editorial Board

ISSN Print: 2164-0165 ISSN Online: 2164-0181

<https://www.scirp.org/journal/mme>

Editor-in-Chief

Prof. C. W. Lim

City University of Hong Kong, China

Editorial Board

Dr. Ibrahim M. Alarifi

Majmaah University, Saudi Arabia

Prof. Eugen Axinte

Gheorghe Asachi Technical University of Iasi (TUIASI), Romania

Dr. Vincenzo Bianco

University of Genova, Italy

Prof. Daniel Chen

University of Saskatchewan, Canada

Dr. Gang (Sheng) Chen

Marshall University, USA

Prof. Shuming Chen

Jilin University, China

Prof. Wen-Feng Ding

Nanjing University of Aeronautics and Astronautics, China

Prof. Babak Ebrahimi

Petroleum Industry Research Engineering Company, Iran

Prof. Asghar Esmaeeli

Southern Illinois University, USA

Dr. Sachin Goyal

University of California, USA

Prof. Linxia Gu

University of Nebraska-Lincoln, USA

Prof. Linghui He

University of Science and Technology of China, China

Dr. Xingjian Jing

Hong Kong Polytechnic University, China

Prof. Jaehyung Ju

University of North Texas, USA

Prof. Abdullah Abbas Kendoush

Augusta Technical College, USA

Dr. Hong Jin Kim

Globalfoundries, USA

Dr. Samir Mekid

King Fahd University Petroleum & Minerals, Saudi Arabia

Prof. Fateh Mebarek-Oudina

University of 20 Août 1955-Skikda, Algeria

Dr. Gordon R. Pennock

Purdue University, USA

Dr. Faisal Talib

Aligarh Muslim University, Aligarh, India

Prof. Giuseppe Vairo

University of Rome "Tor Vergata", Italy

Dr. Yu-Fei Wu

City University of Hong Kong, China

Dr. Ng Teng Yong

Nanyang Technological University, Singapore

Prof. Yong Zhou

Sun Yat-sen University, China

Table of Contents

Volume 14 Number 3

August 2024

Design of a Novel Robotic Fish Structure Utilizing PVC Gel Actuators

Ruyhan, N. Bibi, S. Rahman, A. Al Hossain Newaz, A. Kadir, N. Uddin.....57

Modern Mechanical Engineering (MME)

Journal Information

SUBSCRIPTIONS

The *Modern Mechanical Engineering* (Online at Scientific Research Publishing, <https://www.scirp.org/>) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$69 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright and reuse rights for the front matter of the journal:

Copyright © 2024 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

Copyright for individual papers of the journal:

Copyright © 2024 by author(s) and Scientific Research Publishing Inc.

Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

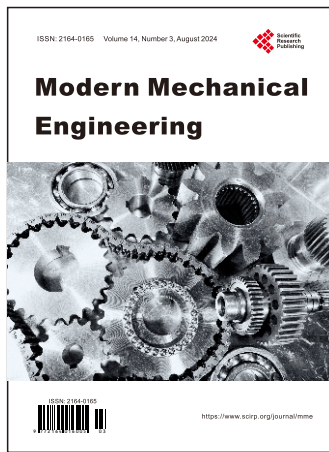
Disclaimer of liability

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: mme@scirp.org



Call for Papers

Modern Mechanical Engineering

ISSN Print: 2164-0165 ISSN Online: 2164-0181

<https://www.scirp.org/journal/mme>

Modern Mechanical Engineering (MME) is an international journal dedicated to the latest advancement of mechanical engineering. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of mechanical engineering.

Editor-in-Chief

Prof. C. W. Lim

City University of Hong Kong, China

Editorial Board

Dr. Ibrahim M. Alarifi
 Prof. Eugen Axinte
 Dr. Vincenzo Bianco
 Prof. Daniel Chen
 Dr. Gang (Sheng) Chen
 Prof. Shuming Chen
 Prof. Wen-Feng Ding
 Prof. Babak Ebrahimi
 Prof. Asghar Esmaeili
 Dr. Sachin Goyal
 Prof. Linxia Gu
 Prof. Linghui He
 Dr. Xingjian Jing
 Prof. Jaehyung Ju
 Prof. Abdullah Abbas Kendoush
 Dr. Hong Jin Kim
 Dr. Samir Mekid
 Prof. Fateh Mebarek-Oudina
 Dr. Gordon R. Pennock
 Dr. Faisal Talib
 Prof. Giuseppe Vairo
 Dr. Yu-Fei Wu
 Dr. Ng Teng Yong
 Prof. Yong Zhou

Majmaah University, Saudi Arabia
 Gheorghe Asachi Technical University of Iasi (TUIASI), Romania
 University of Genova, Italy
 University of Saskatchewan, Canada
 Marshall University, USA
 Jilin University, China
 Nanjing University of Aeronautics and Astronautics, China
 Petroleum Industry Research Engineering Company, Iran
 Southern Illinois University, USA
 University of California, USA
 University of Nebraska-Lincoln, USA
 University of Science and Technology of China, China
 Hong Kong Polytechnic University, China
 University of North Texas, USA
 Augusta Technical College, USA
 Globalfoundries, USA
 King Fahd University Petroleum & Minerals, Saudi Arabia
 University of 20 Août 1955-Skikda, Algeria
 Purdue University, USA
 Aligarh Muslim University, Aligarh, India
 University of Rome "Tor Vergata", Italy
 City University of Hong Kong, China
 Nanyang Technological University, Singapore
 Sun Yat-sen University, China

Subject Coverage

All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy. The journal publishes original papers including but not limited to the following fields:

- Applied Mathematics and Mechanics
- Biomechanics
- Celestial Mechanics and Dynamical Astronomy
- Computational Mechanics
- Computer Methods in Applied Mechanics and Engineering
- Continuum Mechanics and Thermodynamics
- Damage Mechanics
- Engineering Fracture Mechanics
- Experimental Mechanics
- Mathematical Fluid Mechanics
- Mechanics in Medicine and Biology
- Mechanics of Composite Materials
- Mechanics of Materials
- Mechanism and Machine Theory
- Non-Linear Mechanics
- Non-Newtonian Fluid Mechanics
- Numerical and Analytical Methods in Geomechanics
- Rock Mechanics and Mining Sciences
- Solid and Structural Mechanics
- Theoretical and Applied Fracture Mechanics

We are also interested in: 1) Short Reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book Reviews—Comments and critiques.

Website and E-Mail

<https://www.scirp.org/journal/mme>

E-mail: mme@scirp.org

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



**Scientific
Research
Publishing**

Website: <https://www.scirp.org>

Subscription: sub@scirp.org

Advertisement: service@scirp.org