



*International Journal of Engineering Research and Development (IJERD)*

IJERD : Editorial Board

Editorial Board Members:

Dr. H. U. Akay - Purdue University at Indianapolis (IUPUI)  
Dr. Martin P. Bendsoe - Technical University of Denmark  
Dr. F. Brezzi - University of Pavia, Italy  
Dr. M.D. Castellano - University of Zaragoza, Spain  
Dr. J. S. Chen - University of California  
Dr. A. Combescure - National Institute of Applied Science, France  
Dr. J. Fish - Rensselaer Polytechnic Institute  
Dr. D. K. Gartling - Engineering Sciences Center, Sandia National Laboratories  
Dr. S. Ghosh - Ohio State University  
Dr. S. Gopalakrishnan - Indian Institute of Science, India  
Dr. I. Harari - Tel Aviv University, Israel  
Dr. Ping Hu - Dalian University of Technology, China

Associate Editorial Board Member:

Dr. S. R. Idels hn - Korea Advanced Institute of Science & Technology, Korea  
Dr. S. Im - Argentinean Association for Computational Mechanics (AMCA), Santa Fe, Argentina  
Dr. Y. Jaluria - Lulea University of Technology  
Dr. W. Kanok - Nukulchai - Asian Institute of Technology, Thailand  
Dr. Tarun Kant - Indian Institute of Technology, India  
Dr. K. M. Liew - City University of Hong Kong, Hong Kong  
Dr. L. E. Lindgren - Rutgers, the State University of New Jersey  
Dr. H. A. Mang - Technical University of Wien Karlsplatz, Austria  
Dr. Shaker A. Meguid - Univ. Politecnica de Catalunya, Spain  
Dr. C. A. Mota Soares - University of Toronto, Canada  
Dr. S. Mukherjee - National Taiwan University, Taiwan  
Dr. E. Onate - Technical University of Lisbon Polo I.S.T., Portugal  
Dr. M. Papadrakakis - National Technical University of Athens, Greece  
Dr. Glaucio Paulino - University of Illinois at Urbana-Champaign  
Dr. Elio Sacco - University of Minnesota University of Cassino, Italy  
Dr. B. A. Schrefler - University of Padova, Italy  
Dr. K. Tamma - University of Cassino, Italy  
Dr. Y. B. Yang - Cornell University

Editor-in-Chief

International Journal of Engineering Research and  
Development(IJERD)

E-mail: [ijerd.editor@gmail.com](mailto:ijerd.editor@gmail.com)

Website: [www.ijerd.com](http://www.ijerd.com)



I  
J  
E  
R  
D

**Contents :**

<b>Safety Interventions in Urban Planning For Vulnerable Road Users</b>	<b>01-08</b>
Rajbir Singh, Gyanendra Singh	
<b>Analysis of Greenhouse Gas Emissions from an Activated Sludge Wastewater Treatment Technology</b>	<b>09-12</b>
Tamas Karches, Peter Orgovanyi, Edit Vadkerti	
<b>Biomedical Waste Management in the wake of Covid-19: Challenges and Current state of Affairs in India</b>	<b>13-19</b>
Rajbir Singh Rathee	
<b>Development of Cost Effective Lab Scale 6 Tesla Superconducting Magnet</b>	<b>20-28</b>
V.Ravindra, Uttam Bhunia, P.N. Vishwakarma, V V Rao, S.K. Sarangi	
<b>An Overview of Recent Developments in Energy Efficiency of Wireless Networks and Emerging Technologies in 5G Networks</b>	<b>29-43</b>
Dr. Tarek M. Attia	
<b>A Novel Approach to Improve Medical Image storage and security by using Wavelet Coding Method</b>	<b>44-51</b>
Prachi Dhankhar, Pradheep Manisekarn, Surendra Pal Singh	

## International Journal of Engineering Research and Development (IJERD)

International Journal of Engineering Research and Development is an international premier peer reviewed open access engineering and technology journal promoting the discovery, innovation, advancement and dissemination of basic and transitional knowledge in engineering, technology and related disciplines.

We follow "Rigorous Publication" model - means that all articles appear on IJERD after full appraisal, effectiveness, legitimacy and reliability of research content. International Journal of Engineering Research and Development publishes papers online as well as provide hard copy of Journal to authors after publication of paper. It is intended to serve as a forum for researchers, practitioners and developers to exchange ideas and results for the advancement of Engineering & Technology.

Comprehensive, fast and efficient research cycles allow scholars to make progress in their careers more effectively thanks to immediate access to new research materials, findings and the latest scientific developments.

It aims to promote the integration of Computer Science and Engineering, Information Technology, Electrical and Electronics Engineering, Electronics and Telecommunication, Mechanical Engineering and Civil Engineering.

We audit the performance of research articles, using a wide range of indicators to assess their impact on readers and their dissemination to the wider world. The editors reserve the right to reject a paper or make changes to the content if there are serious problems with the content or with violations of our publishing policies.



### IJERD Mission

- Share FREE knowledge
- Contribute to change
- Provide the best service
- Promote research
- Aid development

### IJERD Aim

The Journal is to provide a medium through which Engineering Researchers and scholars from around the world would be able to publish their scholarly papers applied and/or fundamental research works.

### IJERD Subject Category

- Electrical, Electronics and Computer Engineering,
  - Information Engineering and Technology,
  - Mechanical, Industrial and Manufacturing Engineering,
  - Automation and Mechatronics Engineering,
  - Material and Chemical Engineering,
  - Civil and Architecture Engineering,
  - Biotechnology and Bio Engineering,
  - Environmental Engineering,
  - Petroleum and Mining Engineering,
  - Marine and Agriculture engineering,
  - Aerospace Engineering.
- many more engineering fields.....

## Submit your paper in IJERD

Submissions must be original and should not have been published previously or be under consideration for publication while being evaluated by IJERD. All articles are subjected to a peer-review process. All submitted articles will be judged based on their quality

Authors are requested to submit their articles in M.S Word format to the e-mail id: [ijerd.editor@gmail.com](mailto:ijerd.editor@gmail.com) or online submission process on IJERD website [www.ijerd.com](http://www.ijerd.com)

### Terms of Submission

Papers must be submitted on the understanding that they have not been published elsewhere and are not currently under consideration by another journal. The submitting author is responsible for ensuring that the article's publication has been approved by all the other coauthors. It is also the authors' responsibility to ensure that the articles emanating from a particular institution are submitted with the approval of the necessary institution. Only an acknowledgment from the editorial office officially establishes the date of receipt. Further correspondence and proofs will be sent to the principal author before publication unless otherwise indicated. It is a condition of submission of a paper that the authors permit editing of the paper for readability.

### Peer Review

All manuscripts are subject to peer review and are expected to meet standards of academic excellence. Submissions will be considered by an associate editor and if not rejected right away by peer-reviewers, whose identities will remain anonymous to the authors.

### Paper Acceptance:

The final decision on publication is made by the Editor-in-Chief upon recommendation of the Editorial Board Members. If the manuscript is accepted for publication, it must not be published in any periodicals elsewhere without the permission of the editorial board

### Copyright Form

Open Access authors retain the copyrights of their papers, and all open access articles are distributed under the terms of the Creative Commons Attribution license, which permits unrestricted use, distribution and reproduction in any medium, provided that the original work is properly cited.

The use of general descriptive names, trade names, trademarks, and so forth in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal are believed to be true and accurate on the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

### IJERD Indexing Partners

All published paper in IJERD index in following world wide libraries.

Academic Journals Database, J-Stage, Cabell directories, Q-Sensei, Microsoft Academic,

IndexCopernicus, Ulrich's™, EBSCO, Scirus, Google Scholar, ScientificCommons, CiteSeerx.....

.....[www.ijerd.com](http://www.ijerd.com)



**Contents :**

**Safety Interventions in Urban Planning For Vulnerable Road Users** 01-08  
Rajbir Singh, Gyanendra Singh

**Analysis of Greenhouse Gas Emissions from an Activated Sludge  
Wastewater Treatment Technology** 09-12  
Tamas Karches, Peter Orgovanyi, Edit Vadkerti

**Biomedical Waste Management in the wake of Covid-19:  
Challenges and Current state of Affairs in India** 13-19  
Rajbir Singh Rathee

**Development of Cost Effective Lab Scale 6 Tesla Superconducting  
Magnet** 20-28  
V.Ravindra, Uttam Bhunia, P.N. Vishwakarma, V V Rao, S.K. Sarangi

**An Overview of Recent Developments in Energy Efficiency of  
Wireless Networks and Emerging Technologies in 5G Networks** 29-43  
Dr. Tarek M. Attia

**A Novel Approach to Improve Medical Image storage and security  
by using Wavelet Coding Method** 44-51  
Prachi Dhankhar, Pradheep Manisekarn, Surendra Pal Singh

I  
J  
E  
R  
D