**INTERNATIONAL JOURNAL OF ADVANCES IN MECHANICAL AND CIVIL ENGINEERING**

**(IJAMCE)**

**Print Version: Volume- 7, Issue- 1**

ISSN (Print): 2394-2827

**Frequency:** 6 per Year

Current Impact Factor: 3.664

**PUBLISHED BY**



**INSTITUTE OF**

**RESEARCH AND JOURNALS**

Mail: editor@iraj.in | www.iraj.in

**COMMUNICATION ADDRESS**

**International Journal of Advances in Mechanical and Civil Engineering (IJAMCE)**

C/o-Institute of Research and Journals

Plot No- 30, Dharma Vihar, Khandagiri, Bhubaneswar, Pin-751030, Odisha, India

Journal Home page: [**www.ijamce.iraj.in**](http://www.ijamce.iraj.in)

**GENERAL INFORMATION:** INTERNATIONAL JOURNAL OF ADVANCES IN MECHANICAL AND CIVIL ENGINEERING (IJAMCE) published monthly journal under ISSN 2394-2827 and unit of Institute of Research and Journals.

ONLINE VERSION AVALABLE AT [**www.ijamce.iraj.in**](http://www.ijmas.iraj.in)

**COPYRIGHT**

Copyright©2020 International Journal of Advances in Mechanical and Civil Engineering (IJAMCE)

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher. Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

All the published research can be referenced by readers/scholars/researchers in their further research with proper citation given to original authors.

**DISCLAIMER:** Statements and opinions expressed in the published papers are those of the individual contributors and not the statements and opinion of IJAMCE. We assumes 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. The number of papers and content published inside the journal may be differed from the print to online publication.

**IJAMCE Board Members**

**Editor In Chief**

**Dr. R. A. Savanur**

**Professor & HOD**

**Dept. Of Mech. Engineering**

**BLDEA’s CET., BIJAPUR**

**Ph.D (Aeroelasticity) NAL. Bangalore**

**M.Tech. (Design) I.I.T. KANPUR**

**Mail: Ijamce.Iraj@Yahoo.Com**

**Associate Editor**

**Prof. Goodarz Ahmadi**

**Professor**

**Mechanical And Aeronautical Engineering**

**Clarkson University,USA**

**Fellow Of ASME, ISME And ISCE**

**Other Editorial Board Members**

**Dr.P.SIVAPRAKASH**

**Associate Professor,**

**Department of Mechanical Engineering,**

**A.S.L.Pauls College of Engineering& Technology, Coimbatore**

**Member: National Safety Council of USA**

**J. K. Chen,**

**William And Nancy Thompson Professor**

**Department Of Mechanical And Civil Engineering**

**University Of Missouri**

**Columbia, MO 65211, USA**

**Mohamed Saber Mohamed Gad Nemat Alla**

**Mechanical Engineering Department, Engineering**

**Research Division, National Research Centre (NRC),**

**El Dokki, Giza, Egypt.**

**Dr. R. SARAVANAN**

**Professor / Mechanical Engineering**

**Elenki Institute of Engineering and Technology,**

**Hyderabad, India**

**Dr. Vadlamudi Parthasarathi Naidu**

**Scientist**

**Multi Sensor Data Fusion Lab,**

**Flight Mechanics & Control Division,**

**National Aerospace Laboratories, (Council Of Scientific & Industrial Research)**

**DR. P.R. Tailor**

**Professor In Mechanical Engineering Department,**

**S. V. National Institute Of Technology, Surat,INDIA**

**Ph.D. In Mechanical Engineering,I.I.T, Bombay**

**DR. Mohammad Asaduzzaman Chowdhury**

**Professor**

**Department Of Mechanical Engineering**

**Dean, Faculty Of Mechanical Engineering**

**Dhaka University Of Engineering And Technology (DUET), Gazipur**

**Gazipur-1700, Bangladesh.**

**Dr.P.SIVAPRAKASH**

**Associate Professor,**

**Department Of Mechanical Engineering,**

**A.S.L.Pauls College Of Engineering& Technology, Coimbatore**

**Member: National Safety Council Of USA**

**Life Member :Indian Chemical Society**

**TABLE OF CONTENTS**

|  |  |  |
| --- | --- | --- |
| **Sl No.** | **TITLES AND AUTHORS** | **Page No.** |
| 1. | **Forecasting Travel Demand Modeling of Kabul City-2025 Considering Age Grouping**   * *Mohammad Hamid Atif, Yoshitaka Kajita* | **1-6** |
| 2. | **Study on Efficacy of Ring Roads for Urban Development, by Using Japanese’s Experiences “Case of Kinshasa’’**   * *Zico Mpungi Nsiala, Miki Watanabe* | **7-14** |
| 3. | **Forecasting Travel Demand Modeling of Kabul City-2025 Considering Age Grouping**   * *Sureeporn Koadpratum, Tien Yin Chou, Pi-Hui Huang* | **15-20** |
| 4. | **Investigating Real Time Ambient Air Quality Status and Air Temperature during Kalipuja/Diwali Festival in Different Land use Types –Case Study Kolkata**   * *Sohini Sen, Debashish Das, Anupam Debsarkar, Raja Ghosh* | **21-27** |
| 5. | **Enhancement of Index & Engineering Properties of Black Cotton Soil using RHA & WHA Including Lime**   * *Shubha Khatri, S.S.Goliya* | **28-33** |
| 6. | **Bondgraph Modeling of Dynamic Interaction between the Concrete Slab and Subgrade for High Speed Track**   * *Saurabh Bhardwaj, Yamika Patel, Vikas Rastogi* | **34-38** |

◈◈◈

**EDITORIAL:**

It is my proud privilege to present the inaugural Volume-5, Issue-3 of **International Journal of Advances in Mechanical and Civil Engineering (IJAMCE)**based on selected received papers across the world. This issue brings out the various articles from diverse areas of Mechanical and Civil Engineering. This journal is intended to provide a platform for researchers, educators and professionals to present their discoveries and innovative practice and to explore future trends and applications in the field computer science and engineering. However, this journal will also provide a forum for dissemination of knowledge on both theoretical and applied research on the above said area with an ultimate aim to bridge the gap between these coherent disciplines of knowledge. Thus the forum accelerates the trend of development of technology for next generation. Our goal is to make the journal useful and interesting to audiences involved in research in these areas, as well as to those involved in design, implementation and operation, to achieve the goal. The journal addresses issues for the vertical and horizontal applications in this area. The field of Mechanical and Civil Engineering along with classical subjects such as Automation, Mechatronics, and Robotics, Surface engineering. Civil Engineering.

This issue contains Seven articles in total from various parts of the country. I am sure the contributions by the authors shall add value to the research community. I welcome the researchers and M.tech scholars to contribute their research findings to **IJAMCE**.

**Associate Editor, IJAMCE**

**Prof. Goodarz Ahmadi**  
Professor  
Mechanical and Aeronautical Engineering  
Clarkson University,USA  
Fellow of ASME, ISME and ISCE

★★★