





www.conferenceworld.in

13th International Conference on Recent Development in Engineering, Science, Humanities and Management (ESHM-2020)

Jointly Organized by :

Gurukul Institute of Engineering & Technology, (Affiliated to RTU & Approved By A.I.C.T.E.)

Kota, Rajasthan, India

VENUE

The International Centre Goa,
Dr. E Borges Road, Dona Paula, Panjim, Goa (India)

25th July, 2020

ISBN: 978-93-90103-05-8

13th International Conference on Recent Development in Engineering, Science, Humanities and Management (ESHM-2020)

Editors

DR. A. K. SHARMA

Publish By:

A.R. Research Publication

Preface

Conference World and AR Research Publication is fast growing group of academicians in Engineering, Sciences and Management. AR Research Publication is also known for fast reply and zero error work. Conference world has organized a various conferences at renowned places namely Delhi University; New Delhi, Jawaharlal Nehru University; New Delhi, PHD Chamber of Commerce and Industry New Delhi, YMCA New Delhi, India International Centre New Delhi Sri Venkateswara college of Engineering and Technology, Andhra Pradesh, Dhananjay Mahadik Group of Institutions (BIMAT), Shivaji University, Maharashtra, Vedant Engineering Kota and many more places across the country.

We are very pleased to introduce the proceedings of the 13th International Conference on Recent Development in Engineering, Science, Humanities and Management (ESHM-2020). As for previous conferences, the theme was the link between the information provided by conference world and the use made of this information in assessing structural integrity. These were the issues addressed by the papers presented at the conference. The level of interest in the subject matter of the conference was maintained from previous events and over 49 suitable papers were submitted for presentation at the conference.

Papers were well represented in the conference to arouse a high level of international interest. Three countries were represented in the final program from Europe, North America and Asia. In the event, the conference was highly successful. The presented papers maintained the high promise suggested by the written abstracts and the program was chaired in a professional and efficient way by the session chairmen who were selected for their international standing in the subject. The number of delegates was also highly gratifying, showing the high level of international interest in the subject. This is also indicated by the large number of countries, 01 represented by the delegates. This Proceeding provides the permanent record of what was presented. They indicate the state of development at the time of writing of all aspects of this important topic and will be invaluable to all workers in the field for that reason. Finally, it is appropriate that we record our thanks to our fellow members of the Technical Organizing Committee for encouraging participation from those areas. We are also indebted to those who served as chairmen, without their support, the conference could not have been the success that it was. We also acknowledge the authors themselves, without whose expert input there would have been no conference. Their efforts made a great contribution to its success.

About Conference

13th International Conference on Recent Development in Engineering, Science, Humanities and Management (ESHM-2020) is a global event organized by Conference World at The International Centre Goa, Dr. E Borges Road, Dona Paula, Panjim, Goa (India). This conference provides an international forum for researchers, developers, engineers and practitioners who are involved in real time projects that provide solutions to exchange their valuable ideas and showcase the ongoing works which may lead to path breaking foundation of the futuristic engineering. It accentuates indispensability of interdisciplinary and cross – linked thinking with respect of innovation and market opportunities. All the accepted paper will be published in International Journal with ISSN & Conference proceeding having ISBN.

Chief Patron

Mirosalawa Kajko Matttsson Tenkiska Hogskolan University, Sweden

Patron

Dr. Ashish Dutt Sharma (Director), G.I.E.T., Kota

Chief Guest

Dr. Nitin Malik (Registrar)

Dr. B. R. Ambedkar University, Dr. O. P. Verma

Principal, G B Pant Engineering College, New Delhi

Guest of Honour and Speaker

Dr. O. P. Verma

Principal, G B Pant Engineering College, New Delhi

Dr. Surender Singh Saini

Principal Scientist, CSIR-CSIO, Chandigarh

(Honorary Secretary, IETE Chandigarh)

Dr. Monika Gupta

Sr. Scientist, ISRO Chandigarh

International Advisory Board

Dr. Bhupinder Kaur (Associate Professor),

Akal University, Bathinda

Ms. Bharti Kapoor Assistant Professor),

SGTB Khalsa College, Anandpur Sahib.

Dr. Paramjeet Singh (Associate Professor),

Punjab University, Chandigarh.

Mr. Sahil Kumar

GGS Khalsa College, Chandigarh.

Dr. Paraminder Singh (Principal)

Khalsa college, Mahilpur

Dr. Jaskaran Bhullar (Principal)

MIMT Malout.

Dr. D.S. Pathania (Professor and Head)

Guru Nanak Dev Engineering College, Ludhiana.

Dr. Phulwinder Pal Singh (Principal)

Khalsa college, Chola Sahib

Dr. Rashmi Dhawan (Assistant professor)

Department of Chemistry, S.A. Jain(PG) College, Ambala city.

Mr. Sandeep Kumar (Assistant Professor)

Dyal Singh College, Karnal

Dr. Sandeep Kumar

Centre of Higher Education, HP University, Dharamshala.

Dr. Tarlok, Centre of Higher Education

HP University, Dharamshala.

Dr. Fulwinder Pal Singh (Principal)

Shaheed Baba Jiwan Singh Khalsa College, Amritsar

Dr. Rajinder Kaur (Principal)

Guru Gobind Singh Khalsa College for Women, Jhar Sahib

Dr. Manbeer Kaur

Department of Zoology

B.A.M. Khalsa College, Garhshankar

International Advisory Board

Dr Aeila Falahati

University Putra Malaysia, Serdang, Malaysia

Dr. Ajay Singh

University of Hail, Hail, Kingdom of Saudi Arabia

Dr P. Corell

REU Program Director, Jackson State University Jackson, USA

Dr. D. Jone Stanley

M.S., M. Phil., Ph.D., Texas A&M University, USA

Samer Said Sayed Radwan

Faculty of Applied Arts, Helwan University, Egypt

Dr. Abd El-Aleem Saad Soliman Desoky

Sohag University, Egypt

Prof. Dr. Amer A. Taqa

DBS Dept. College of Dentistry, University of Mosul, Iraq

Mehdi Gheisari

Islamic Azad University, ShamsiPour College,

Bahonar College ,Iran

Protap Mollick, Researcher,

American International University - Bangladesh

Department of Computer Science and Engineering.

Prof. Dr. Amer A. Taqa

DB'S. Department, College of Dentistry Mosul University

Dr. Eng. Magdy Shayboub A. Mahmoud.

Assistant Professor of Computer Science Department.

Faculty of Computers and Informatics.

Suez Canal University, Ismailia, Egypt.

Dr. Elsanosy M. Elamin

Assist. Pro. and Head Department of Electrical Engineering,

University of Kordofan. Faculty of Engineering. Elobeid, Sudan

Dr. Jaiprakash Narain Dwivedi

Research Associate, Kyushu Institute of Technology, Japan

Proceeding of the conference has been published with 978-93-90103-05-8

13th International Conference on Recent Development in Engineering, Science, Humanities and Management (ESHM-2020) was organized by The International Centre Goa, Dr. E Borges Road, Dona Paula, Panjim, Goa (India) on 25th July, 2020 Total 95 papers were received for the conference and 49 papers were shortlisted by the committee.

Published by

AR Research Publication,

3/186 Santpura Govindpuri Modinagar- 201201 . Dist: Ghaziabad

13th International Conference on Recent Development in Engineering, Science, Humanities and Management

(ESHM-2020)

(Vol-13) Copyright © 2020, by AR Research Publication (India)

No part of this publication may be reproduced or distributed in any form or by any means, electronic,

mechanical, photocopying, recording, or otherwise or stored in a database or retrieval system without the prior

written permission of the publishers. The program listing (if any) may be entered, stored and executed in a

computer system, but they may not be reproduced for publication.

This edition can be exported from India only by the publishers, AR Research Publication (India)

ISBN: 978-93-90103-05-8

Managing Director: Gauri Sharma

Senior Researcher—Product Development: Ms. Pratima Singh Head—

Production (Higher Education and Professional): Satinder Kulkarni

Information contained in this work has been obtained by AR Research Publication (India), from sources

believed to be reliable. However, neither AR Research Publication (India) nor its authors guarantee the accuracy

or completeness of any information published herein, and neither AR Research Publication (India) nor its

authors shall be responsible for any errors, omissions, or damages arising out of use of this information. This

work is published with the understanding that AR Research Publication (India) and its authors are supplying

information but are not attempting to render engineering or other professional services. If such services are

required, the assistance of an appropriate professional should be sought.

Cover Design: Abhishek Sharma

vi