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**4TH INTERNATIONAL CONFERENCE ON  
RESEARCH DEVELOPMENTS IN APPLIED  
SCIENCE, ENGINEERING &  
MANAGEMENT**

**AEM- 2018**

***VENUE***

**(IEI, CHANDIGARH ) INSTITUTION OF ENGINEERS,  
INDIA , SECTOR 19A, CHANDIGARH**

**3RD NOVEMBER 2018**

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**ISBN: 978-93-87793-55-2**

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**Editors**

**AMANPREET SINGH**

**DR. K.C SHARMA**

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***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 *4th International Conference on Research Developments in Applied Science, Engineering & Management (AEM- 2018)* 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 30 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**

*4th International Conference on Research Developments in Applied Science, Engineering & Management (AEM- 2018)* is a global event organized by Conference World at (IEI, Chandigarh ) Institution of Engineers, India ,Sector 19A, Chandigarh. 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 Guest**

Shri Surender Singh Saini  
Principal Scientist, CSIR-CSIO, Chandigarh  
(Honorary Secretary, IETE Chandigarh)

## **Conference Convenor**

Dr. Amanpreet Singh

### **Guest of Honour**

Dr. Monika Gupta  
Sr. Scientist, ISRO Chandigarh

## **Keynote Speaker**

Dr. Arvind Kumar  
Industrial & Management Engineering Department,  
Indian Institute of Technology Kanpur, India  
Prof. R. S. Salaria  
Professor, Department of Computer Science  
RBIENT, Hoshiarpur

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Proceeding of the conference has been published with **ISBN: 978-93-87793-55-2**

*4th International Conference on Research Developments in Applied Science, Engineering & Management (AEM- 2018)* was organized by **Conference world at (IEI, Chandigarh ) Institution of Engineers, India , Sector 19A, Chandigarh on 3rd November 2018** Total 95 papers were received for the conference and 30 papers were shortlisted by the committee.

**All the accepted and presented papers of the duly registered authors will be published in the UGC Approved International Journals**

**Published by**

**AR Research Publication,**

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

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This edition can be exported from India only by the publishers, AR Research Publication (India) ISBN: 978-93-87793-55-2

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