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**14TH INTERNATIONAL CONFERENCE ON
RECENT TRENDS IN ENGINEERING SCIENCE AND
MANAGEMENT**

ICRTESM-19



**Vedant College of Engineering & Technology,
Bundi, Rajasthan
(Affiliated To Rajasthan Technical University, Kota Rajasthan)**

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**14TH INTERNATIONAL CONFERENCE ON
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Editors

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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; New Delhi, YMCA New Delhi, India International Centre New Delhi and many more places across the country.

We are very pleased to introduce the proceedings of the 14th International Conference on recent trends in Engineering Science and management (ICRTESM-19). 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 65 suitable papers were submitted for presentation at the conference.

Papers were well represented in the conference to arouse a high level of international interest. Five 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, 14 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 chairman. 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

14th International Conference on Recent trends in Engineering Science and Management is a global event organized by Vedant College of Engineering & Technology & Conference World. 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 without any additional fee.

About Institution

VCET was established in the year 2008. The institute is approved by All India Council for Technical Education (AICTE), New Delhi and affiliated to Rajasthan Technical University, Kota, Rajasthan. The College has 40469 square meter of land and is situated on Kota-Bundi Highway in the calm outskirts and a green environment.

The Institution has highly qualified and meritorious faculty members in all the departments to impart Technical Knowledge to the Students and taking various steps to mould the student to meet the requirement and expectation by the corporate sector. VCET has 6 UG Courses 2 PG Courses 3 Diploma Courses and 1 ITI Course. Admission Qualification, Eligibility and Fees structure are prescribed by the Government of Rajasthan.

Entrepreneurial skills are also given equal importance and developed by giving some practical projects and on the job training, for this purpose collaborations with various institutes of high repute has been made and have been started in the mentorship of the trained and experienced faculty. In fact the strength of VCET's linkage to the corporate world sets the university apart and gives us a strong advantage in terms of academics.

Vedant college of engineering & technology has well qualified and experienced faculty and also encourages scholarships and fee waivers for meritorious students. The impetus provided to students for learning is fast paced to enhance their employability skills. Labs are designed by keeping in mind the recent scenario and work culture.

International Guest Message

I will like to thank the convener Dr. Ashish Mathew and Dr. Amit Sharma also the organizers of this conference especially Conference World for inviting me to serve as the guest speaker in this international conference. This is indeed an opportunity for me to share ideas with my fellow colleagues and team of researchers that came from different places of the world.

This conference is a multidisciplinary conference that touches every aspect of life in the world. As human being, we cannot do without engineering, science or management. Conducting conference on recent trends in these areas will surely bring development in our respective communities.

I strongly believed that our teaming researchers will do justice to the conference topics by sharing their researches and ideas with us in this gathering. However, I will like to give highlights about the topics of this conference (i.e. engineering, science and management).

ENGINEERING

Engineering is playing significant role nowadays in providing societal development in terms of economic, social and physical infrastructural progress. Engineering is divided into various field such as civil engineering, electrical engineering, chemical engineering, mechanical engineering, computer engineering, software engineering, biomedical engineering, etc. Let's briefly look at recent trends in some of these areas as follows:

Civil Engineering: This is one of the engineering area that deals with the design, construction, and maintenance of physical and naturally built environment such as roads, bridges, dams, buildings, etc. There are so many innovations or trends that is taking place in the field of civil engineering such as thermal bridging, kinetic footfall, kinetic roads, self-healing concrete, photovoltaic glazing, 3D modelling (smart cities), modular construction, and cloud collaboration.

Electrical and Telecommunication Engineering: This aspect of engineering deals with application of electricity such as power generation, transmission as well as distribution. It also deals with control system which handles various applications like automobile device that control the vehicle's speed. Electrical engineering also deals with electronics, microelectronics and signal processing.

Today, the impact of electrical and electronic engineering is more on the area of telecommunication. This focuses on the transmission of information across a channel. Telecommunication sector has brought a lot of trends or innovations such as digital revolution (analog to digital; analog uses amplification which accumulate noise while digital uses repeater which regenerate perfect and exact signal), broadband (i.e. bandwidth that measures and transmit videos). Previously, its narrowband and wideband that are in used for measuring voice and images respectively. It also brings about wireless and internet revolutions.

COMPUTING, SCIENCE AND TECHNOLOGY

The area of computer and information technology is the aspect that is fast growing and virtually touching every part of human endeavor. The technology has touched different areas ranges from medical, sciences, communications, security and economy. The most trends in computing and technology today involves the use of artificial intelligence and intelligent computing and are applicable to various fields which can be discussed as follows:

- i. **Medical and life sciences (biomedical, biotechnology, etc):** Technology brings about hybrid field of computer science and biology which includes computational properties of cells like genetic regulatory circuits, DNA computation, DNA self-assembly, cellular and DNA logic gates. It brings about intelligent information gathering on patients and their environment changes, intelligent interaction and services, and even intelligent diagnosis and care plans. If you visit hospitals and medical centres you will discover some sophisticated diagnostic machines that handles aspect of diagnosis on patients like CT Scan and MRI machines. For examples, there are also robots like RIBA Robobear which is a robotic medical assistant that was developed in Japan. This robot can lift patient into and out of beds, help position humans into seating and standing positions as well as lift patients from wheel chairs. We also have Vecna VGo which is a telepresence robot use by health care partners to provide remote care to children. The robot performs rounds checks on patient every day, take pictures and gather data to track progress.
- ii. **Communication and Control Applications:** This has to do with applications used in handling information processing like image processing, traffic/vehicle control system, electronic platforms such as e-government, e-learning, etc.
- iii. **Security and Pattern Recognition** (radar system, face identification, object recognition)
- iv. **Economy and Financial Services:** technology brought about control on financial institutions like check cashing, fraud detection, foreign exchange, and biometric linkages. A lot of technologies are in place now for efficient and successful financial transactions. It brings about fraud preventive techniques at three (3) levels: transaction level which uses machine learning and statistical models to flag fraudulent behavior up-front as well as the use of sophisticated algorithms once the transaction is completed; account level which monitors account activity to identify abusive behavior like frequent payments and suspicious profile changes; network level which monitors account-to-account interaction like frequent transfer of money from

several accounts to one central account. It increases aspect of online transactions through the e-commerce platforms.

- v. Green technology and sustainable energy, transportation, and agriculture (smart farming etc.).

MANAGEMENT

Organizational change is one of the major trends in the field of management sciences today. It is an act of shifting or transitioning individuals, teams or organizational structure from a current state to a desired future state with the aim of maximizing organizations benefits and minimizing the change impacts on the workers as well as avoiding distractions. The current trends to be discussed under management are globalization, diversity and flexibility.

Globalization according to Scholte (2005) is the process of international integration arising from the interchange of world views, products, ideas and other aspects of culture. Therefore, organizations are now operating in an international economy that is characterized by the greater and stronger competition, greater economic independence and collaboration. Most business organizations are using corporate business strategies, marketing plans as well as production efforts to local domestic markets.

Factors like trade, investment, migration, and dissemination of knowledge are the basic aspects of globalization. However, globalization can be divided into economic globalization, cultural globalization and political globalization. Each poses positive and negative impacts.

Diversity: It is another imperative and latest trend in the organizational change. Today the population of the world is growing at a high rate in developing countries, while remaining stable or decreasing in the developed world. This brings about income inequalities and economic opportunity leading to increased immigration and migration within and between nations.

At the same time, people of different ethnic and cultural backgrounds possess different attitudes, values, and norms. Increasing cultural diversity in both public and private sector organizations focuses attention on the distinctions between ethnic and cultural groups in their attitudes and performance at work. This greater focus can result in tension between finding similarities and highlighting differences in the face of greater diversity in organizations

Flexibility: In order to stay competitive, organizations are constantly changing and restructuring the organization. This is increasing flexibility and decreasing costs for the companies. Business process reengineering, business process out-sourcing, job redesign, and other approaches to optimize business processes have been implemented by the organizations in order to increase operational and process efficiency, while reducing the costs of doing business. Changes in business and operational processes need time to stabilize for employees to learn the new processes, become familiar with them, and be able to operate effectively and efficiently. At the same time, organizational systems, processes and people are responding differently to different situations due to differentiated customer needs, increasing diversity in workplace and change in technology and markets

CONCLUSION

My respected senior colleagues at the high table and fellow researchers seated, time will not permit me to exhaust everything about the conference topics. The essence is to give highlight about the theme of the conference, which I believe we can learn more from you at the end of this conference.

Finally, my deep and sincere appreciation goes to the Conference world, management of Vedant College of Engineering & Technology Bundi, organizers, as well as the entire researchers presently at this conference for sharing your views and ideas.

Thank you all.

Dr. Yanusa Hassan

Dept. of Science

Modibbo Adama University of Technology Yola, Nigeria.

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Total 200 papers were received for the conference and 65 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

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