

# Creative Trends in Engineering & Technology

Feras Ahmad Hamid Hanandeh  
Aarti Singh

Foreword by  
Dr. Amjad Miqdadi

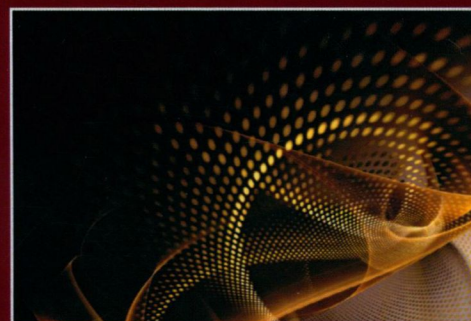


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# Creative Trends in Engineering & Technology

Feras Ahmad Hamid Hanandeh  
Aarti Singh



*Creative Trends in Engineering and Technology* discusses in chapters—innovating ideas that help not only human beings but the entire universe in areas like engineering, medicine, biotechnology etc. This book attempts to cover most of the work done by researchers in various fields to help Postgraduate Students, Professionals and Researchers in different areas.

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Handanah • Singh

# **CREATIVE TRENDS IN ENGINEERING AND TECHNOLOGY**

*Editors*

**FERAS AHMAD HAMID HANANDEH**

**AARTI SINGH**

*Foreword*

**DR. AMJAD MIQDADI**



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# **CREATIVE TRENDS IN ENGINEERING AND TECHNOLOGY**



## **Message from Dr Rajiv Pandey**

ASSOCIATION OF COMPUTER ELECTRICAL ELECTRONICS AND COMMUNICATION ENGINEERS (ACEECom) and Institute of Doctors Engineers and Scientists (IDES) are pleased to present the proceedings of this joint International Conference Creative Trends in Engineering and Technology.

The joint conference is aimed at creating a forum for deliberations on advances in Computer Science, Information Technology, Communications, Networks, Power Electronics, Communication Engineering, and Instrumentation Engineering. The call for papers was extended to research scholars and professionals from across the world to publish and present their research work. The conference received numerous papers on the decided theme, the received papers were double blind reviewed by subject experts and only papers with high subject quality were accepted and considered for publishing in the proceedings, both online and offline versions. The selected papers are being submitted in all major indexing services like EI, ISI Web of Science, DBLP, IET Inspec, Scopus etc. and are likely to be indexed in due course. The selected papers and their extended versions are also being considered for publications in various journals of high repute.

The speakers and researchers deliberated at length the findings and explored the various advancements in technology that may be a support to betterment of human kind in this 21<sup>st</sup> century.

The Joint conference was successfully organized by the team of ACEECom and IDES, my heartiest congratulations to all of its members. I Wish this joint International conference a grander success in the future editions.

**Dr. Rajiv Pandey**  
Amity University, India





## Foreword

As an IDES member since January 2013, it is my great honor and pleasure to introduce the proceedings of the IDES joint International Conferences.

This event comes to reflect the essence of the IDES mission “*To stimulate the researchers to build the world through innovation*” and to achieve its main objective “*To Promote the Research and Development activities in the Science, Medical, Engineering and Management field*”. Hence, the IDES shows its core values by continue keeping the promise through conducting these two important conferences.

While this joint conferences covers the most recent topics in Applications of Software and Web Engineering, Computer Science and Applications, E-Commerce, E-Marketing and E-Cash, Information Technology and related topics, also the joint event embraces hot topics in a vital field of research such as Power Electronics, Control System, Instrumentation, Communication Engineering, Instrumentation Engineering, Digital Electronics, Electrical Power Engineering and Electrical Machines.

No doubt that the results and the conclusions of the 67 papers – the number of registered papers will be presented at the conferences – will surely add a value to the current accumulated corresponding knowledge internationally and they will enrich the big pyramid of the scientific research outcomes which has been created several years back by the IDES in specific.

I take this opportunity to thank all participants to make this conference real. I thank the authors of the papers which will be presented at the conference. I extend my thanks to all who worked hardly behind the scene, my thanks to Honorary Chair, all Chairs and Co-Chairs and Program Committee Members.

Finally, I wish for every presenter a successful presentation, as well as wishing the conference to add a distinguished contribution to the word.

**Dr. Amjad Miqdadi,**  
Head of Business Administration Department,  
Aqaba University of Technology,  
Aqaba – Jordan





## **Preface**

Welcome to the joint International Conference organized by IDES and ACEECom in 2016!!

I believe that this conference would be an enriching experience for all participants. Further, unique environment of Hyderabad with historic attractions and its Hi-Tech modern infrastructure would provide you moments to cherish for lifetime!

The scope of this conference is to bring together researchers from fields of Computer science, electrical, electronics, mechanical, civil and Telecommunication engineering on one platform, so that they may participate in discussions and disclose their research findings. Telecommunication has wide practical utility and it utilizes computer science, electrical, civil, mechanical and electronics engineering for its strength and functionalities. This fact stipulates need for better technologies and optimized strategies.

This joint conference would provide avenue for interaction among scientist, scholars and technocrats from different parts of country and abroad, facilitating them better understanding of the diversity of different approaches as well as of their similarities. This would help intellectuals to get updates on recent achievements in Computer science, electrical, electronics and telecommunication engineering and would enlighten new dimensions for future research.

I wish each of you successful deliberations, stimulating discussions, fruitful acquaintances and wonderful experience.

I would like to express my thanks to program committee and organizing committee for their hard work. Special thanks to the reviewers for their selfless efforts for selecting quality research papers. 67 scholarly research papers have been selected under various themes of interest for this conference.

Best Regards!

**Aarti Singh**  
Guru Nanak Girls College  
India



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