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**IETE Approved  
4<sup>th</sup> National Conference on Advancements in Communication,  
Computing and Electronics Technology (ACCET – 2017)**

*Guest Editor in Chief*  
**Dr. A. A. Keste**

**Organized By**



**Department of Electronics and Telecommunication  
Modern Education Society's College of Engineering, Pune-01.**



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The objective of International Journal of Electrical, Electronics and Computer Systems (IJEECS) is to help professionals working in the field, educators and policy makers to contribute, to disseminate information and to learn from each other's work. IJEECS also aims at establishing channels of communication between Centres of Excellence for electrical engineers, electronic engineer, Computer Engineers, academicians and users worldwide.

## **Contents**

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### **Circuits and Systems**

Analog Circuits

Digital Circuits

Mixed Signal Circuits

Nonlinear Circuits and Systems

Sensing and Sensor Networks

Filters and Data Conversion Circuits

RF and Wireless Circuits

Photonic and Optoelectronic Circuits

Low Power Design and VLSI Physical Design

Biomedical Circuits

Assembly and Packaging

Test and Reliability

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### **Computers and Information Technology**

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To develop industry oriented manpower to accept the challenges of Globalization, by promoting Value Education through motivated trained faculty, by maintaining conducive environment for education at affordable cost, by promoting Industry Institute interaction, by involving alumni.

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- by imparting Electronics and Telecommunication knowledge through trained faculty in a conducive environment,
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## **HON. PRINCIPAL'S MESSAGE**

It is a great pleasure to me that the Department of Electronics and Telecommunication Engineering is organizing 4th National Conference on 'Advancements in Communication, Computing and Electronics Technology [ACCET-17]' during March 2-3, 2017. It has brought a benchmark in achievement of the institution.

Technical education is changing its phase in the era of information explosion. It has created new challenges and opportunities for intellectuals to direct their efforts to develop technology for the social and economic growth of country. It is need of the hour in the fast changing industrial scenario across the world that one has to be in tune with the trend as far as the recent advances in technology is concerned. The response for the conference from all over India was encouraging. That shows the awareness of emerging technology in young and dynamic scientists and engineers.

I am sure the upcoming conference will deliver the basic and advanced field practical work in various interdisciplinary and core areas of engineering applications. It is the team-work that makes a big difference and success in organizing conference. I congratulate Prof. P. B. Chopade, Head, Department of Electronics and Telecommunication Engineering and coordinators Dr. P. P. Mane, Prof. A. A. Dhavlikar and the entire faculty of the department for their untiring efforts in maintaining high standards in preparing of this conference souvenir and making it a big success.

I wish 'ACCET – 2017' a big success!

2nd March 2017  
PUNE

**Prof. Dr. A. A. Keste**  
Principal



## **HON. VICE - PRINCIPAL'S MESSAGE**

It is indeed a matter of immense pleasure to know that the Department of Electronics and Telecommunication, MES College of Engineering (MESCoE), is going to organize the 4th National Conference on "Advancements in Communication, Computing and Electronics Technology" (ACCET-2017) on 2-3 March, 2017.

Nowadays we use various Electronics and Electrical goods which are the applications of modern computer technology. The frequent changes in the technology of such goods greatly impact on day to day activities. The main objective of such conference is to provide a forum for discussing the development, implementation, use and application of emerging technologies in the field.

I am confident that the conference discussions and the publication of the conference proceeding will bring opportunities among the academicians, corporate delegates, research scholars and students to present their innovative ideas, most up-to-date findings, and technical proficiency in the various fields of research trends in Electronics and Telecommunication.

On behalf of MESCoE, I heartily welcome Keynote Speakers, eminent academicians, corporate delegates and all the paper presenters to ACCET-2017.

I would like to congratulate Department of Electronics and telecommunication faculty and staff for organizing such events.

I take this opportunity to wish grand success to the conference and memorable time for all the participants at ACCET-2017.

**Dr. Raibhole V. N.**  
Vice-Principal & Professor,  
MES College of Engineering, Pune



## **HOD'S MESSAGE**

It is a profound moment, to be convening the 4th National conference 'Advancements in Communication, Computing and Electronics Technology [ACCET-17]' being organized by the Department of Electronics and Telecommunication Engineering.

The present century is referred to as the Information and Technology age. Continued advances in the previous decade have led to the explosion of Internet and Wireless Communication. The processing performances once exclusive to Super Computers are now available in handheld personal digital devices. Improvements in Integrated Circuits have enabled space explorations, made automobiles more efficient, revolutionized the nature of warfare, brought vast libraries of information into our Web Browsers and made world a more interdependent place.

ACCET-2017 has attracted both, established academicians and research students from around the nation. The research papers published in this proceeding, bears testimony to the fact that exciting work is been undertaken in numerous topics related to electronics and telecommunication engineering.

The success of this conference is a result of, efforts of contributors and presenters who have shared with us the latest developments in their respective fields. Such an event is not possible without the hard work of the reviewers, to whom I am deeply indebted for taking out time to provide professional opinions on the submissions.

I am highly obliged to our devoted and ever-enthusiastic Principal Dr. A. A. Keste for his constant support and encouragement.

I highly appreciate the efforts of the coordinators Dr. P. P. Mane, Prof. A. A. Dhavlikar and the conference organizing team, who have coordinated and liaised with the contributors, reviewers and many other parties' concerned. The non-teaching staff cannot be forgotten, their dedicated support ensures that the conference is of high quality and makes the conference a thoroughly enjoyable gathering.

**Prof. P. B. Chopade**  
Head of Department



## **FOREWORD**

It gives us a great pleasure to introduce the Souvenir of the 4th National level Conference organized by the Department of Electronics and Telecommunication Engineering. Within a last few decades we have witnessed gradual evolution in the field of electronics which has provided new technologies, whose impact on the industries presently, is greater and more spread than that of any development or invention since the turn of century. These technologies are meeting the needs of present electronic world which may be characterized by increased densities of human and machines, transportation speeds, telecommunication volume and information processing volume. While the basic principles are largely the same, practices have changed enormously.

New fortune lies ahead for those with innovative ideas and talents to bring their ideas into reality. This conference will help in bridging the gap between the industry, institution and various interdisciplinary research areas. We tend to provide the new updates and expansion on the supplement available to reflect the challenges looming in various aspects of Electronics and Telecommunication engineering.

We are thankful to Hon. Principal, Dr. A. A. Keste and the management of M. E. Society for their constant support and encouragement in making this National conference a big success. We highly appreciate editor, Mr. B. P. Mohanty, IRD India for publishing the special issue of ACCET – 2017 in the International Journal IJEECS. We are thankful to ACCET-2017 paper reviewers for giving their precious time for reviewing papers. We are also thankful to Mr. Vivek Murkute from Technofield Solutions, Pune for the sponsoring amount of Rs. 5000/- for ACCET-2017. The team work behind this conference, by the enthusiastic, hardworking and sincere faculty of the department, is highly commendable.

It is our pleasure to extend a warm welcome to all the participants and eminent key note speakers from academics and industry for attending this conference. We wish the participants a very fruitful and enjoyable stay in Pune.

**Dr. P. P. Mane**  
Coordinator

**Prof. A. A. Dhavlikar**  
Coordinator

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