

## Preface

It is a great privilege to write the preface of the conference proceedings devoted to the field of Science, Engineering and Technology. This conference proves to be a viable source to bridge the gap between industry and the institute. This conference has acquired a special significance because it is organized as a joint effort to give a platform to the teaching faculty, Research Scholars and Post Graduate scholars to enhance their research activities and win recognition, along with the aim of evolving a future course of action for technical curriculum development.

More than three hundred technical papers in emerging areas of engineering have been received. The presentation of these papers in the technical session generated lively discussion and the deliberations there after intended to generate prudent suggestions and recommendations. Papers reflect the author's opinion and are published as presented in the interest of timely dissemination.

We would like to acknowledge all those who supported ICETSET-2014. We thank for the guidance and encouragement provided by our seniors and the joint team efforts of all the faculty members and staff of our college.

We thank the advisory committee members, technical committee members and people from different institutions and industries from all over world for their guidance and cooperation. Finally, we thank the members of the organizing committee for their valuable advices in the organization and helpful peer review of the papers. We thank all the faculty members, staff and students for their full support and cooperation.

We hope that ICETSET-2014 was a forum for fruitful discussions that shed light on new ideas and foster collaborative research. We are sure that these proceedings will serve as an important research tool and the knowledge which will be returned to the community not only as published papers but also as products and processes.

**Rama Reddy Sathi**  
**Jamuna Venkatesan**  
**Booma Nagarajan**  
**Saritha Natesan**

# **ORGANISING COMMITTEE**

## **Patron**

Prof. J Mala, Chief Executive Officer, Jerusalem College of Engineering

## **Chair**

Dr.G.Sambandan, Director, Jerusalem College of Engineering.

## **Conveners:**

Prof.N.Ravi, HOD-ECE, Jerusalem College of Engineering,

Prof.P.Neelamegan, HOD-MBA, Jerusalem College of Engineering

## **Steering committee members**

Dr. M .Kalaivani, HOD-BME

Dr. N .S. Elongovan, HOD-Civil

Dr. C. R. Rene Robin, HOD-CSE

Dr.S.Rama Reddy,EEE

Dr.S .Nagarajan, HOD-EEE

Dr. V. Jamuna, HOD-EIE

Prof. A. Vijayakumar, HOD-IT

Dr. Parameshwari, HOD-MCA

Dr. P. Anuradha, HOD- Mathematics & English

Prof. Chitra Ramachandran, HOD-Physics & Chemistry

Prof .Mary KuttyCyriac, ECE

Dr. S.Deepa, Prof, Physics

Dr. C. Anbalagan, Prof, Civil

Dr. N. John Jebarathinam, Prof,Chemistry

Dr. S. Anne Ligoria, Prof, Civil

Prof. S. Sellappa, Civil

Prof. S. Manickavasagam, ECE

Dr. S. Prakash, Prof, ECE

Dr. P. Sankar, Prof, ECE

Dr. G. Geetha, Prof, CSE

Dr. R. Vaidhyanathan, Prof, Chemistry

Prof.V.J. Subhashini, MCA

Dr. V. Gowri, Prof, Civil

Dr. S.Bhama Rani, Prof, English

Mr. R. Sivagnanam, Chief Librarian

Mr. D. Kangeyan, Administrative Officer

Mr. K.P.Raja, Finance Officer

### **International Advisory Committee**

Dr. P Paramasivam, NUS, Singapore

Mr. Vikram Subramanian, Oracle Public cloud

Dr. Saqib Saeed, Bahria University

Mr. N M Bhaskar, Micron Asia, Singapore

Dr. Ahmed Zohaa, Brunel university

Dr. Heba Ahmed Hassan, Dhofar University

Dr. SattarAboud, Middle East University

Dr. Ganapathy Kumar, Nanometrics, USA

Dr. Michal Wozniak, Wroclaw University of Technology

Mr. ElamuruganVaiyapuri, TarkaSys, California

Dr. Mohammed Yeasin, University of Memphis

Dr. Mohammed Atiquzzaman, University of Oklahoma

Dr. S Lakshmi, Oman University