

# PREFACE

We are pleased to bring before you the proceedings of the International Mechanical Engineering Congress (IMEC) - 2014 which is scheduled during 13-15 June 2014. The IMEC 2014 is organized by the Department of Mechanical Engineering, National Institute of Technology, Tiruchirappalli, Tamil Nadu, India during the year of Golden Jubilee celebrations.

The congress aims to bring together the researchers, faculty, students and industrial professionals from all over the world to share their research findings, experience and to discuss the emerging issues facing in different spheres of Mechanical Engineering. This event primarily focuses on today's technical challenges, research updates and breakthrough innovations that are shaping the future of Mechanical Engineering. The theme - "Advancement of Mechanical Engineering to meet global challenges" has been selected keeping worldwide share of ideas and sustainability in context to present day impact of the same on the environment.

We are sure that the participants in this conference will draw maximum benefit from the conference and their exposure to this will inculcate in them the habit of analyzing critically the day to day practical problems and get the proper solution for the same. This will further improve the technical brilliancy. IMEC 2014 will provide a platform for sharing and exchange of ideas and information between all the stake holders of technical education and research.

The selected and peer reviewed papers of IMEC 2014 focused on 11 Major topics and are presented in 11 chapters: (1) Advanced Material and Manufacturing Processes (2) Nanomaterials and Nanotechnology in Machinery (3) Dynamics and Applied Mechanics (4) Tribology (5) Thermodynamics and Thermal Engineering, Fuel and Diesel (6) Applied Fluids Mechanics in Design of Machines and Equipment (7) Vibration and Control (8) Drive Systems of Machines, Mechatronics, Robotics and Control (9) Engineering Development on Sustainable Energy (10) Labour Safety, Ergonomics, Reliability and Safety of Machines and Mechanisms (11) Industrial Engineering

The major sponsor for this conference is Technical Education Quality Improvement Programme (TEQIP) - II, besides others and the proceedings are published by International Journal Applied Mechanics and Materials.

We would like to thank the organizing committee members, staff, students and reviewers for their continuous support and guidance without whom all this wouldn't have been possible.

We understand that all participants and readers will benefit from the proceedings of IMEC 2014, which will enrich their knowledge with the advanced technology developments.

Dr. K. R. Balasubramanian

Dr. S. P. Sivapirakasam

Dr. R. Anand

Editors

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