



VIT University, India – GCMM 2014; International Conference Proceedings

12th GLOBAL CONGRESS ON MANUFACTURING AND MANAGEMENT



Editorial Preface

This special volume of *Procedia Engineering* contains papers presented at the 12th Global Congress on Manufacturing and Management (GCMM – 2014), held during 8 – 10 December 2014 at VIT University, Vellore, India. A total of 258 papers were presented during the conference, covering the entire spectrum of Materials Processing, Manufacturing Engineering, Industrial Engineering and Management.

Materials and Manufacturing field is undergoing a rapid transformation due to unexpected challenges arising from the current approach to optimization and continuous performance improvement in manufacturing processes, production of large products and development of new materials. The 12th edition of the conference has earmarked the objective to offer a common platform for professionals, researchers and educators from industry, research centers and academia to present and discuss recent advances in the field of Manufacturing Engineering.

Papers relevant to the scope of GCMM include the following areas:

- Global manufacturing challenges
- Manufacturing processes and emerging trends
- CAD/CAM, Computer integrated manufacturing
- Robotics
- Additive Manufacturing
- Mechatronics and automation
- Modelling and simulation of manufacturing systems
- Virtual manufacturing and prototyping
- Materials and manufacturing
- Nano materials and technologies
- Material systems for emerging manufacturing
- Manufacturing applications in biomedical engineering
- Environment and manufacturing innovation and strategies
- Engineering leadership and management
- Intelligent manufacturing systems
- Flexible/Agile/Reconfigurable manufacturing systems
- Manufacturing management and knowledge management
- Innovations in technology transfer and acquisition
- Web based enterprises; e-business and e-commerce
- New paradigms for technology management
- Inventory and materials management
- Energy efficient manufacturing
- Micro / Precision Engineering
- Product design and development

This proceeding contains 258 refereed papers which were presented at the GCMM 2014 conference. All the papers included in this proceedings are reviewed by the experts in double blind peer review process, and finally revised by the authors for the improvement according to referee's reports and advices. Appreciation is forwarded to reviewers who contributed to improve the quality of papers by reviewing the papers, providing constructive critical comments, improvements and corrections to the authors. We also recognize the support of the reviewers, who were in charge of acceptance/rejection process.

We wish to thank the GCMM Board Members for their continuous input in planning and organizing the whole event, Scientific, Program and Organizing Committees, Session Chairs, student helpers and Secretarial/Technical staff, for contributing to the success of this Conference.

Finally, we wish to thank all the authors who submitted papers, making this conference possible, and the authors of accepted papers for making appropriate modifications and corrections with care and patience. It was the quality of their presentations and their passion to communicate with the other participants that really made this conference a grand success.

Prof. M. Anthony Xavier Ph.D
Professor in Mechanical Engineering
Manufacturing Division
School of Mechanical and Building Sciences
VIT University, Vellore – 632 014
India

Prof. Prasad KDV Yarlagadda Ph.D
Professor in Smart Systems
School of Chemistry, Physics and Mechanical Engineering
Science and Engineering Faculty
Queensland University of Technology
2, George Street, Brisbane Qld 4001,
Australia